TENNESSEE HOME ENERGY CONSERVATION TASK FORCE

REPORT

PRESENTED TO THE DIRECTORS OF THE TENNESSEE REGULATORY AUTHORITY

NOVEMBER 15, 2006

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PURPOSE

The Charge from the Tennessee Regulatory Authority (TRA) Directors

The Tennessee Home Energy Conservation Task Force was formed on July 24, 2006 as a result of a motion (see Exhibit A) by Director Eddie Roberson that requested review of energy conservation plans adopted in other states, or by the industry, examination of specific energy conservation needs and make recommendations on a home energy conservation plan for Tennessee.

The directors unanimously approved the motion. All directors voiced their support and recognized that by increasing public awareness of the need to conserve home energy and offering common sense conservation measures, consumers would be better able to afford to heat their homes with natural gas. The directors envisioned three broad areas for the Task Force to consider at a minimum: education, diagnostics and remediation.

The directors indicated that they want to "lead the charge in increasing the public awareness of the need to conserve home energy and to establish partnerships with various stakeholders to offer common sense conservation measures that will better enable consumers to afford to heat their homes with natural gas this winter." The directors also recognized their jurisdictional limitations in regulating the cost of the commodity or to spur increases in exploration or the expansion of natural gas capacity. The Task Force was also asked to recommend a research funding component.

Task Force Members

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Kelly Ross Gillespie, Alliance to Save Energy
Dr. Francine Sevel, National Regulatory Research Institute
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PURPOSE

The Magnitude of the Problem

The number of Low-Income Home Energy Assistance Program (LIHEAP) eligible households in Tennessee was more than 731,000, based on 2001-2003 data[1]. In terms of vulnerability, more than 285,000 of these eligible households have at least one person 60 years or older; more than 138,000 have at least one child under 6 years old; and more than 247,000 have at least one person with a disability. Some households fit into multiple categories.

LIHEAP is funded through a grant from the U.S. Department of Health and Human Services. Eligibility for LIHEAP benefits is based on established federal poverty guidelines, and documentation of household income is required. Tennesseans whose household income does not exceed 125 percent of federal poverty guidelines – $25,000 a year for a family of four – are potentially eligible for the program. The assistance does not go directly to the client. Instead, it is paid directly to the utility company or home energy provider. If eligible, clients could receive up to two payments a year.

The good news is that more than 60,000 needy Tennessee families are assisted each year through LIHEAP[2]. But the vast majority of LIHEAP-eligible households cannot be served due to budget limitations and increasing costs of energy.

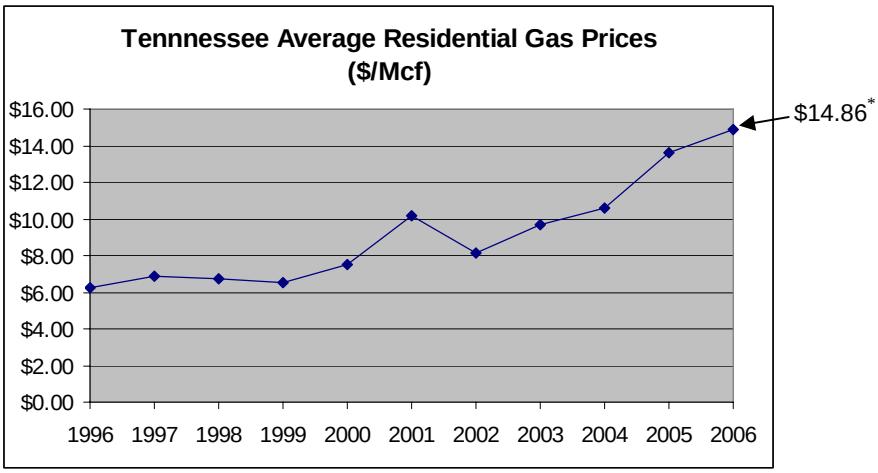
Additionally, about 3,000 Tennessee households are served (weatherization assistance only, no appliance replacement) each year by the state's Weatherization Assistance Program (WAP). About 30 percent of the households served use natural gas. However, the list of those waiting for WAP services is typically over 5,000 households long.

According to 2005 U.S. Census Bureau figures, Tennessee's 5.8 million citizens lived in 2.4 million occupied households, with 12.5 percent of the families at or below the federal poverty level[3]. At 125 percent of the federal poverty level, using the above 731,000 number, *more than 30 percent of Tennessee households are LIHEAP-eligible.*

Figure 1 shows that Tennessee average annual residential natural gas prices have increased by more than 117 percent over the last 10 years, from $6.26 per thousand cubic feet (Mcf) in 1996 to $13.61/Mcf in 2005[4]. This is being dictated by supply and demand and is largely beyond the control of Tennessee's natural gas local distribution companies (LDCs) and the TRA. The price increases have placed an increasing burden on Tennessee's residential customers, particularly those that are LIHEAP-eligible but not receiving assistance.

[1] http://www.acf.hhs.gov/programs/liheap/data/cps_eligibles.html
[2] http://www.state.tn.us/humanserv/news/06/news-08-24-06.pdf
[3] http://factfinder.census.gov
[4] http://tonto.eia.doe.gov/dnav/ng/hist/n3010tn3a.htm

PURPOSE



* The 2006 price is an estimate based on weighted January-August 2006 prices.

FIGURE 1

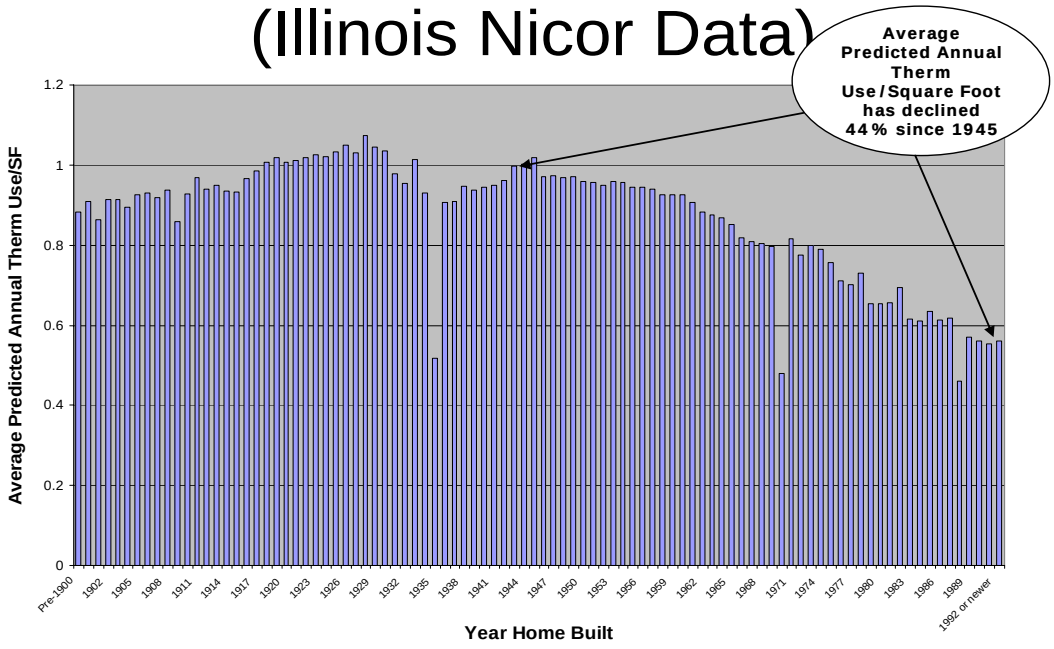
With average Tennessee residential natural gas consumers using about 65 million British thermal units (MMBtu) per year[5], *this amounts to an increase in annual gas bills from $395 in 1996 to almost $859 in 2005.* (This is a simplified, illustrative example that does not take into account degree days in each year, changes in average gas use per household over time, or monthly natural gas price variations.) Many LIHEAP residents live in older households, where gas use per household is even higher than average due to lack of insulation and lack of high-efficiency equipment.[6] If one presumes that older homes have the equivalent of a 60 percent efficient furnace instead of a 78 percent efficient furnace, gas energy use goes from 65 MMBtu to 104.5 MMBtu (assuming the water heater uses 20 MMBtu). For that energy usage pattern, *gas bills have gone from $635 in 1996 to over $1,380 in 2005.*

[5] American Gas Association Gas Facts with 2004 Data, Table 6-14

[6] Nicor presentation to the Illinois Commerce Commission Natural Gas Energy Policy Committee, September 28, 2006.

PURPOSE

Average Predicted Annual Therm Use/Square Foot by Year Home Built (Illinois Nicor Data)



Tennessee has about 1 million residential natural gas users[7]. Most of those are served by municipal utilities not under the jurisdiction of the TRA. About 330,000 natural gas users are served by the state's three investor-owned gas LDCs. This report deals with this subset of regulated natural gas customers. How many of these are LIHEAP-eligible? That is not known, but if we use statewide statistics, with about 30.5 percent of households statewide as being LIHEAP eligible, this implies that *upwards of 90,000 Tennessee's natural gas customers of investor-owned LDCs could be LIHEAP eligible.*

[7] Op Cit A.G.A., Table 8-5

TIMELINE & AVAILABLE RESOURCES

Task Force members would like to thank the TRA for sponsoring the opportunity to discuss a natural gas conservation policy for Tennessee. While our review has been productive, limits on time and resources have restricted the scope of our review. More time and careful consideration are required before the Task Force can propose a comprehensive conservation program that is ready to be implemented. The Task Force and the assigned TRA staff have exchanged a variety of views and a wealth of information while sharing scarce resources within an expedited time period. As a result of our efforts, the Task Force presents this report and a series of recommendations. The recommendations set forth do not necessarily represent the complete views of each respective Task Force member. While the members of the Task Force share a broad consensus on most of the recommendations and various aspects of a working conservation policy, there remain some issues and "nuts and bolts" specifics that require further time, study, deliberation and resources before we can provide a detailed road map the Authority may choose to follow.

CONCLUSIONS

During our discussions, it became apparent that many energy conservation diagnostic and remediation techniques serve equally well when applied to homes using electricity or natural gas for space and water heating. This conclusion was reinforced as we examined and discussed various energy conservation programs that have been established in other states.

While we recognize that the Authority does not regulate a large number of electric utilities in Tennessee, we believe the overall effort to conserve home energy should include the conservation of other forms of energy and possibly extend to other sectors such as commercial and industrial as well. Therefore, it is the consensus of the Task Force that the Authority should expand the scope of its energy conservation initiative to include other forms of energy. If the Authority elects to adopt this recommendation, input from a much broader cross section of stakeholders, some the TRA does not regulate, as well as the support of the legislature will likely be required.

Time constraints as well as the specific language of our charge made it imperative that we focus of our present efforts on the low income natural gas user in Tennessee. Because of the various interests involved, and the many issues that must be addressed, we remain convinced that a truly effective Tennessee home energy conservation initiative requires more time and study to implement, even when confined to the low income natural gas consumer. As a result, we divided the specific home energy needs in Tennessee into three categories.

The first category is comprised of short-term needs. These needs are those that can be met quickly and easily without the investment of a large amount of additional time, manpower or other resources. Specific short-term needs we identified center around expanded public education and include the need to:

- Expand the scope and participation of the Task Force, as well as the timeframe for completion.
- Develop an expanded and more coordinated public education effort.
- Promote/publicize energy-efficient appliances.
- Promote IRS tax incentives available for energy conservation investment.

Medium-term needs include those that may take one to two years to meet. Specific medium-term needs we identified include the need to:

- Establish effective funding mechanisms.
- Provide additional support for low income energy programs.
  - improve the home energy audit capacity
  - recruit and train qualified people who can provide this service
  - establish financing for low income remediation
- Support gas technology research.
- Further expand public education.

CONCLUSIONS

Long-term issues require a longer time frame than two years to resolve and may require major policy shifts in order to satisfy. Specific long term issues we identified include the need to:

- Study rate decoupling.
- Work with the General Assembly to enact energy codes and explore broader efficiency targets.
- Explore establishment of a Public Benefits Fund.
- Offer rebates for purchasing energy efficient appliances.
- Further expand public education.

The Task Force developed a set of recommendations that we believe, if adopted and carried out, will address the needs listed above. Details of those recommendations are included in the individual sections of this report. A summary of those recommendations are included here. Since almost all the recommendations require funding for implementation and continued support going forward, the funding issues must be resolved before a truly meaningful home energy conservation program can be established. For that reason, the Task Force believes that funding should be addressed as one of the first steps.

Recommendation: Initiate a workshop to specifically address funding and study decoupling in order to support energy conservation and gas technology/energy conservation research that will allow a diverse set of opinions to be heard.

Recommendation: Publicize home energy conservation tips and information regarding free home energy audits and conservation programs via utility bill inserts and other media.

Recommendation: Conduct seminars concentrating on low/no cost energy conservation measures that can be used to improve home energy efficiency.

Recommendation: Develop a statewide public awareness campaign to promote energy conservation and encourage energy efficient practices.

Recommendation: Consider the use of financial incentives and promote tax incentives to encourage consumers to purchase energy-efficient gas appliances. Consider integration of natural gas appliance replacement into weatherization assistance programs.

Recommendation: Implement a low-income energy conservation program in Tennessee in stages on an expanded time frame that will involve leveraging existing programs including community based partnerships.

Recommendation: Implement a modest pilot program initially to allow for learning and evaluation prior to making major implementation commitments that includes in-home education after installation of energy saving measures.

Recommendation: Work with the General Assembly to adopt energy codes for buildings.

SECTION II

PUBLIC EDUCATION
INCREASED MARKET PENETRATION OF ENERGY
EFFECIENT NATURAL GAS APPLIANCES
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TENNESSEE LOW-INCOME NATURAL GAS
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MODEL ENERGY CODE FOR BUILDINGS

NEEDS AND RECOMMENDATIONS

PUBLIC EDUCATION

Educating our communities about energy efficiency and teaching energy conservation techniques will help protect the environment and lower community costs. Investments in energy efficiency programs have a ripple effect throughout the local economy. For instance, every dollar spent on energy efficiency rather than consumption is reflected in local economic growth. An energy conservation initiative will have a far reaching effect on Tennessee today and in the future.

Today many Americans are concerned about energy prices which remain high according to historical standards. Many are worried because they wonder if they will be able to afford their home energy costs this year. The U.S. Department of Energy reports that low-income families spend 14 percent of their income on energy, while the average family spends 3.5 percent. This is particularly disheartening for low-income households which include the elderly, disabled and children. They are often faced with the choice between paying their energy bills and buying food or medicine. Unfortunately, funding shortages experienced by federal and state budgets, unprecedented poverty levels, and rising energy prices are hampering the ability of organizations to provide assistance. Thus, there is a need to develop public education initiatives that promote energy efficiency through creative solutions for the general public and low-income consumers.

Recommendation (Short Term): Publicize home energy conservation tips and information regarding free home energy audits and conservation assistance programs via utility bills inserts and other media.

Consumers can take several immediate and low-cost measures to conserve energy and lower their utility bills. Such measures include setting your thermostat comfortably low in winter (at 68 degrees or lower); closing vents and doors in unused rooms; keeping window coverings open on sunny days to let the sun's warmth in and then closing them at night to insulate against cold, outside air; rearranging furniture by placing it against inside walls; sealing leaks around doors, windows and other openings, such as pipes or ducts, with caulking or weather-stripping; installing a programmable thermostat; scheduling a furnace and gas appliance tune-up to ensure safety and maximum energy-efficiency. Utility bill inserts are an effective tool to quickly and frequently disseminate conservation tips and information that will foster immediate quantifiable savings to consumers. Utility bill inserts can also guide customers to further information and services, such as free online home energy audits (http://hes.lbl.gov/) as well as state-sponsored weatherization assistance programs (http://www.state.tn.us/humanserv/adfam/afs_w.htm). The use of media strategy such as newspaper, radio and television service announcements would also be effective tools for disseminating energy conservation information and tips to a greater audience in the state. The need for a coordinated and focused public education message across the state by that various participants is particularly underscored in light of the costs associated with the production and use of television spots. Tennessee may consider engaging national and regional energy associations in any coordinated media campaign on public education for home energy conservation practices.

PUBLIC EDUCATION

Recommendation (Medium-term): Conduct seminars with low cost/no cost energy conservation measures to improve the energy efficiency of the home.

Seminars on how to use energy wisely provide information on weatherization to cut down on energy usage and save money. Hands-on demonstrations include weather-stripping, caulking, installing outlet covers, water heater jackets, compact fluorescent bulbs, energy efficient shower heads, pipe insulation, door sweeps, faucet aerators, and programmable thermostats. These demonstrations provide simple, inexpensive tasks low-income consumers are able to perform to make their homes more energy efficient and lower their energy bills. This investment will save on utility bills well into the future. By focusing consumers' attention on how they use energy and providing products and information on how to conserve, we are able to provide long-term solutions that will be beneficial to all concerned parties.

Recommendation (Medium/Long-Term): Develop a statewide public awareness campaign to promote energy conservation and encourage energy efficient practices.

An effective public education initiative requires long-term actions to achieve goals. A sustainable, comprehensive energy awareness program and media campaign involving strong partnerships and collaboration with other stakeholders should be developed and maintained. Sharing expertise and resources provides more comprehensive energy efficiency services to more people more efficiently and more cost effectively. Capitalizing on existing annual campaigns such as Energy Awareness Month in October or Energy Star promotions will reinforce conservation messages. The purpose is to educate homeowners on the importance of energy conservation, identify steps that consumers can take to reduce energy use, and encourage energy efficient practices.

In developing the campaign, support and participation should be solicited from various stakeholders. The campaign could form partnerships with media outlets across the state and involve recognizable public figures, state officials and celebrity sponsors.

Recommendation (Medium/Long-Term): Provide in-home customer education after installation of energy saving measures.

Customer education is a critical component of the program and should be incorporated throughout all stages of the program delivery. Energy experts perform a walk-through of the home and identify ways to reduce energy consumption through behavioral changes. After the installation of energy saving measures, experts explain and demonstrate how to operate and/or upkeep the new equipment. The homeowner receives education on low cost/no cost measures and receives energy education literature and reference materials.

INCREASED MARKET PENETRATION OF ENERGY EFFICIENT NATURAL GAS APPLIANCES

Background

Consumers who employ energy-efficient products in their homes enjoy multiple benefits such as lower home energy bills, increased indoor comfort and reduced air pollution. Greater energy efficiency in appliances also means fewer power plants must be built, air quality is better, and consumers have more income to spend on other goods and services.

A higher utilization of energy-efficient gas appliances could save consumers billions of dollars. The latest national efficiency standards enacted in the Energy Policy Act of 2005 are estimated to save energy users an additional $50 billion net by 2020.[8] However, when comparing an energy-efficient appliance to a less energy efficient and less expensive comparable appliance, the higher initial cost of energy efficient appliances can be a disincentive to consumers who don't understand the benefits. In addition, low-income residents will most likely not be able to afford new natural gas appliances, let alone energy-efficient gas appliances, without significant financial assistance.

Educating consumers on the benefits of energy-efficient appliances, along with financial incentives (e.g. tax incentives and cash rebates) to help pay for the incremental cost associated with high efficiency appliances, will reduce or eliminate the disincentives to purchase more energy-efficient appliances. Energy efficient natural gas appliances will not only cost consumers less to operate and maintain but also will also provide immediate savings in energy use, energy costs and reducing demand.

Recommendation

Tennessee should consider further initiatives to educate consumers on energy efficiency and promote the federal tax incentives for energy-efficient appliances, including financial incentives to consumers to purchase high energy efficient natural gas appliances.

Increase Consumer Education on Energy Efficiency and the Federal Tax Incentives for Energy Efficient Appliances:

It is recommended that Tennessee educate natural gas consumers on the benefits of energy efficiency and the available federal tax credits for high efficiency natural gas appliances such as furnaces, boilers and hot water heaters. The Energy Policy Act of 2005, the new national energy law signed by President Bush, provides valuable federal tax credits for consumers who make certain, specified energy-efficiency upgrades, such as purchasing high efficiency appliances, to their homes between the years 2006 and 2007. In addition to helping savvy consumers lower their energy bills at home, the energy-efficient products eligible for the new federal tax credits actually lower their federal tax bills.

[8] "Leading the Way: Continued Opportunities for New State Appliance and Equipment Efficiency Standards," Appliance Standards Awareness Project and the American Council for an Energy Efficient Economy, March 2006.

Individual residential consumers can get a one-time income tax credit of up to 10 percent, or $500, for installing efficient new windows, insulation, doors, roofs, and heating and cooling equipment in their homes. The overall $500 cap can be reached through the purchase and installation of energy-efficient products including high efficiency central air conditioners, heat pumps, water heaters (up to $300 toward the full purchase price, including installation costs), furnaces and boilers (up to $150 towards the full purchase price, and/or $50 for an efficient air-circulating fan in a furnace, including installation cost.)

Tennessee should work to increase public awareness about the federal tax incentives and educate consumers on the benefits associated with the high efficiency appliances. For instance, all energy-related state programs and agencies should make reference to and advertise the tax incentives and energy efficiency benefits via their websites and other public literature. Tennessee should also explore opportunities to tie this communications campaign to advertising provided by utilities and appliance retailers via their websites, bill inserts, customer service and sales representatives, and contractors. This coordinated effort will help consumers make more informed, energy-conscious decisions when purchasing or replacing natural gas appliances.

Consider State and Local Supplements to the Federal Tax Incentives:
Currently, the federal government is offering tax credits for the purchase of high efficiency appliances such as furnaces, boilers and hot water heaters. Tennessee should explore ways to supplement these federal tax incentives through its own state and/or local tax incentives.

Explore the Use of Other Financial Incentives for High Efficiency Appliance Purchases:
There are many examples of other financial incentive programs for energy efficiency technologies in other states. Cash-back rebates and low-interest financing for customers who purchase energy-smart equipment are the most common form for such incentive programs. Some electric and gas providers in other states offer cash-back rebates or low-interest financing for customers who purchase energy-smart equipment (e.g. Progress Energy Carolinas' Energy Efficiency Financing Program, Virginia Natural Gas' Low Interest Loan Program for High-Efficiency natural gas furnace, Central Florida Gas' Residential Home Builder Energy Efficiency Rebate Program). In certain states, rebates and low interest loans for energy efficient appliances or home improvements are offered directly through state or local agency run programs or partner financial institutions (e.g. New York Energy $mart Loan Fund, Ohio Energy Loan Fund, Energy Loan Program of Oregon and Home Energy Rebate Option Program by the Louisiana Department of Natural Resources). The incentive amount can often cover at least the added cost of upgrading to high-efficiency products. With respect to natural gas furnaces and water heaters, the typical incremental cost difference between the standard and high efficiency models is around $500 and $60, respectively.

Overall, the sponsoring and/or co-sponsoring parties are typically the utilities, the appliance retailer, the appliance manufacturer, state and local energy offices/programs and local financial institutions. The design and administration of existing financial incentive programs vary. The Montana-Dakota Utilities Co., for example, recently proposed a natural gas

conservation programs that offers $150 incentives for the purchase and installation of an ENERGY STAR rated furnace and $30 incentive for the purchase and installation of a high efficiency water heater – both in replacement of existing, less efficient units. Under these programs, the Montana-Dakota Utilities Co. expects to achieve a participation level of 5 percent in its service territory for the furnace incentive during the initial three-year period (equivalent to 1,633 customers), and a participation level of 2 percent in its service territory for the water heater incentive (equivalent to 559 customers). The Montana-Dakota Utilities Co. expects these programs to be cost effective and recovers the cost of these programs through its rates

Tennessee should explore its opportunities to offer rebates and discounted financing to consumers who purchase high efficiency natural gas appliances. It is recommended that eligibility for such incentive programs be clearly defined – i.e. for specific appliance types that meet a minimum efficiency standard. Tennessee may also consider financial incentive programs that provide rebates/discounted financing on a sliding scale; the rebate or discount would increase according to how much more energy efficient the appliance is relative to the minimum program qualification on energy efficiency for that appliance type. Such a structure would give consumers flexibility in choosing appliances most appropriate for their circumstances. Consumers who purchase high efficiency gas appliances will benefit by reducing their natural gas use and energy bills. Ultimately, a higher market penetration of energy-efficient gas appliances will reduce demand in Tennessee for natural gas and stabilize or push down natural gas prices that would not only impact direct consumers of natural gas but also electricity users.

Consider Integrating Natural Gas Appliance Replacement into Weatherization Assistance Programs

It is recommended that Tennessee consider implementing a natural gas appliance replacement program within the state Weatherization Assistance Program. Currently, appliances are not considered in the weatherization of a low-income home. It is recommended that during the assessment of low-income homes, the weatherization agency assess the operating condition of natural gas appliances, such as furnaces, boilers, and hot water heaters, and determine if the natural gas appliance needs to be replaced with a high-efficiency natural gas appliance. It is also recommended that if a natural gas furnace is replaced with a high efficiency gas appliance, that a programmable thermostat be a part of the replacement package. Residents should be educated on the operation of the programmable thermostat and the benefits of energy efficiency practices, such as cleaning the furnace filter on a monthly basis and turning down the thermostat at night or when residents are not home for an extended period of time.

INCREASED MARKET PENETRATION OF ENERGY EFFICIENT NATURAL GAS APPLIANCES

More Information:
Alliance to Save Energy: http://www.ase.org/content/article/detail/2600

Appliance Standards Awareness Project: www.standardsasap.org

Tax Incentives Assistance Project (TIAP): www.energytaxincentives.org

American Council for an Energy Efficient Economy: www.aceee.org

DSIRE (a comprehensive source of information on state, local, utility and federal incentives that promote renewable energy and energy efficiency): http://www.dsireusa.org/

Montana-Dakota Utilities Co.: http://www.montana-dakota.com/

FUNDING

Background

There are various methods of funding a conservation program that include voluntary rate-payer contributions, surcharges, utility stockholder contributions, federal grants, state funding or some combination of all of the above. The Task Force has not yet come to a consensus on the make-up of the funding component. The exact size, nature and specific goals of a home energy conservation plan have not yet been designed. Thus, the Task Force cannot estimate the financial needs of the program at this time.

Another concern that affects a forecast for funding needs is the eligibility of consumers for a conservation program when such consumers reside outside the service area of the cooperating utility companies. In our review of other states in which rate-payers and utilities provide funding, eligibility for weatherization and other conservation measures has been restricted to those consumers within the service area. More discussion of eligibility is required. This is an issue that could potentially affect the makeup of the funding for conservation initiatives

Recommendation

The Task Force recommends future workshops between the stakeholders to discuss the various means and limits for funding conservation program(s).

LOW-INCOME ENERGY CONSERVATION PROGRAM

Background

The Task Force believes there is a compelling need to formulate a home energy conservation program covering the areas served by regulated local natural gas companies. The focus of this plan should be the low-income segment of the population served by natural gas companies. We know that low-income consumers must use proportionately more of their income to pay for energy services. In some cases, their choices are stark: either pay energy bills or required medical bills. Moreover, low-income residents tend to live in older houses where space heating consumption per square foot is much higher than the norm.

While there are well-established federal programs that target this demographic group, specifically the Low-Income Home Energy Assistance Program (LIHEAP) and the Weatherization Assistance Program (WAP), they do not come close to meeting the full needs of low-income consumers in this era of rising energy costs. Quite apart from the humanitarian benefits accruing from the implementation of such a targeted program, natural gas utilities can reduce service shut-off costs and gain improved customer relations from backing such a program.

Recommendation

Implement a low-income, energy conservation program in Tennessee, in stages that may include community-based partnerships.

Explanation

The Task Force, based on its review of exemplary low-income programs now under way in several states, recommends implementing a low-income energy conservation program in Tennessee. The Task Force has had the opportunity to summarize and compile several examples of successful programs operating elsewhere (see Section III), but due to time constraints has not had an opportunity to carefully review the programs and distill all lessons learned. There is a considerable amount of complexity in understanding and evaluating target groups, audit practices, diagnostics, education efforts and partnership relationships associated with each program; and then being able to place all of this within the economic and political culture of Tennessee. Consideration should be given to establishing a community energy savings center or multiple regional centers to serve as community-based resources for energy information, training and materials to assist public agencies, business and residents of Tennessee to best utilize the resources available to them through the wide variety of statewide and local energy efficiency programs. An extension of the Task Force's timetable would permit the necessary analysis to go forward.

All of these programs will require dedicated funding sources. Since the prospect of raising new funds can become a contentious issue, we recommend that a workshop be held to specifically address this issue, allowing a diverse set of opinions to be heard. This would ensure that our deliberations are held in an open, fully-transparent manner.

LOW-INCOME ENERGY CONSERVATION PROGRAM

The Task Force also recommends that implementation take place through a staged approach, starting with a relatively modest pilot program. This will allow for proper learning and evaluation prior to making major implementation commitments. And it also will allow for the orderly build-up of auditing and installment capabilities essential for successful programmatic follow-through.

More Information

Kushler, Mark, et. al, *Responding to the Natural Gas Crisis: America's Best Natural Gas Energy Efficiency Programs,* December 2003. Found at: www.aceee.org

Kushler, Mark, et. al, *Meeting Essential Needs: The Results of a National Search for Exemplary Utility-Funded Low-Income Energy Efficiency Programs,* September 2005. Found at www.aceee.org

Southeast Energy Efficiency Alliance: www.seea.us

Alliance to Save Energy: www.ase.org

LOW-INCOME NATURAL GAS R&D PROGRAM

Energy Research and Development Needs

What are the needs of Tennessee's low-income gas consumers? If one looks at natural gas use in Tennessee, which averages at about 65 Million Btus (MMBtu) per household per year, clearly the largest natural gas using equipment are furnaces or space heating, 40-60 MMBtu, and water heating, about 20-25 MMBtu per year.

Low-income, consumer-targeted R&D is particularly challenging. Since the equipment is lower cost than top-of-the-line appliances, manufacturers have less profit potential and hence less incentive to develop and produce such products. Often, the buyer of the appliance and the gas customer are not the same person, so incentives to buy high-efficiency in this market are split. And, finally the development of low-cost, high-efficiency equipment is much more challenging than higher cost, high-efficiency equipment simply because the sensors, heat exchangers, and other enhancements needed intrinsically are more expensive on the higher efficiency equipment, producing unique challenges in concept development and implementation.

For gas furnaces, there are super high (94 percent efficiency) and very high (90 percent) fully condensing furnace models already on the market and available in Tennessee, and very little needs to be done to improve those models. However, they are high-end equipment, and tend to add $1,500 - $2,500 over the "standard" 78-80 percent efficiency furnaces.

So, instead of engineering the fully condensing gas furnace models already in the marketplace, we propose looking at lower-cost alternatives that can offer almost the same high efficiencies but at a much lower cost premium. One of the primary candidates is a combination space/water heater system that approaches 92 percent efficiency; providing both domestic hot water and space heating. The device incorporates a 50-gallon fully condensing (90 percent efficient) water heater coupled to an air handler. The air handler has a water-to-air heat exchanger that provides the hot air needed to heat the house. This should have good applicability to Tennessee's heating degree days, but needs to be tested in Tennessee to ensure that this is true. Additionally, reliability and durability tests are needed to ensure that the equipment can last for 10-15 years serving both loads. The cost goal for the system is that the combination unit will cost no more than a conventional (78 percent) furnace replacement plus water heater.

Smaller capacity, high-efficiency, lower cost through-the-wall vented space heating systems are also needed for smaller apartment-size loads.

To cover the second biggest household load, major improvement in water heater efficiency is needed. The typical gas water heater has an efficiency of 60 percent, mainly due to standby losses from the tank. Tankless water heaters are being introduced from Europe and Japan that are 80 percent efficient. Issues on installation cost, reliability, maintenance and life need to be addressed for these systems to become a viable efficient alternative to gas storage water heaters R&D efforts are needed on instantaneous water heaters to increase capacity for the U.S. market, reduce corrosion to ensure system durability, and reduce maintenance requirements to increase reliability and eliminate recurring costs.

Additional efforts to reduce costs of high efficiency gas storage water heaters are also needed to ensure water heater replacements are more efficient at minimal cost.

Smart control systems that adjust to occupancy automatically without compromise to occupancy comfort are needed to optimize energy use over the course of the day. For instance, a detector-type device linked to the thermostat and heating system could determine whether or not the dwelling was occupied, or whether the occupants were sleeping, and could turn down the thermostat during those periods. The development of a "natural gas speedometer" that can be downloaded to television/cable sets or home pc's can enable consumers to track natural gas usage in real time. No longer will customers have to wait 30 days to determine how much natural gas they are using, and what it is costing them. (This could also be extended to electricity demand.)

Research Organizations, Funding and Benefits

Natural gas end-use R&D has been performed by many organizations across the country, including the Gas Technology Institute (GTI), gas LDCs, Battelle Columbus Labs, Southwest Research Institute, universities, manufacturers, and the U.S. Department of Energy (DOE) and the national laboratories (including Oak Ridge National Laboratory).

However, natural gas R&D funding has recently been very negatively impacted by the demise in 2004 of the FERC-approved R&D funding mechanism, which collected 1.74 cents/Mcf from residential, commercial and industrial customers for natural gas R&D through a pipeline surcharge, and had been in effect since 1977. This program, administered by GTI (previously called GRI, the Gas Research Institute), collected over $200 million per year and now collects zero. Simultaneously, DOE funding for natural gas R&D and conventional fuel energy efficiency R&D has been substantially reduced. While current numbers for DOE's gas-related R&D are not available, A.G.A. tracking of these data in 1998 showed a DOE gas-related R&D budget of over $250 million annually. This funding is now undoubtedly less than $100 million per year. Gas LDC internal R&D funding has also dropped from over $50 million per year to under $10 million.

An alternative collection mechanism has been established in 21 states by about 2 dozen gas LDCs, where the state public utility commissions have approved an R&D surcharge for gas-consumer-interest R&D for operations and end-use technologies. This mechanism collects about $22 million per year. (About 70 percent of these funds go to GTI.) Some state R&D agencies, most notably the California Energy Commission (CEC) and the New York State Energy Research and Development Authority, use a legislatively mandated systems benefit charge to collect funding for electricity R&D and, in the case of the CEC, natural gas R&D. The CECs gas-related R&D program is funded at $12 million per year, and is scheduled to grow to $24 million.

According to GTI, the gas consumer benefits for these research dollars have been substantial. Estimates by an independent third-party (the University of Illinois at Chicago), state that the benefit-to-cost ratios are over 8-to-1.[9]

[9] See for instance "Benefits of GRI RDandD Results that Have Been Placed in Commercial Use in 1999 through 200,3" Dr. Tony Bournakis, University of Illinois at Chicago, May 2004.

LOW-INCOME NATURAL GAS R&D PROGRAM

GTI believes that natural gas R&D is woefully under-funded in this country, and that it is gas consumers who suffer on account of this, as displayed by today's higher gas prices, higher transmission and distribution operating and maintenance costs and the lack of new high-efficiency, lower-cost gas appliances.

MODEL ENERGY CODE FOR BUILDINGS

Background

For long-term energy savings in homes, the most effective strategy is to build homes that are more energy efficient. According to the American Council for an Energy Efficient Economy (ACEEE), the average southern state could save 105 trillion Btu or about $1 billion in homeowner energy bills over 30 years from upgrading its residential building code.[10]

This would require a more stringent statewide building energy code. According to DOE's Building Codes website Tennessee Residential Building Energy Code is the 1992 Model Energy Code (92 MEC). Local codes jurisdictions have the option of upgrading the energy efficiency code to 2000 IECC with 2001 Amendments. Since Tennessee is a home rule state, county and municipal governments may adopt more stringent codes, but to-date few have. As a result, Tennessee homes consume a greater amount of energy on average than homes in other states, and energy consumers pay the price year after year.

Building codes set minimum building practice standards that raise the overall performance of the housing stock.[11]

Recommendation

Work with the General Assembly to adopt energy codes.

More Information

Building Codes Assistance Project: http://www.ase.org/section/program/buildingcodes

Alliance to Save Energy: www.ase.org/

American Council for An Energy Efficient Economy: www.aceee.org/

[10] ACEEE: "Energy Efficiency's Next Generation: Innovation at the State Level" November 2003. www.aceee.org

[11] Ibid.

SECTION III

OVERVIEW
VALUE PROVIDED
FUNDING CONSIDERATIONS
WHAT MAKES A SUCCESSFUL PROGRAMS
LESSONS LEARNED FROM OTHER STATE CONSERVATION PROGRAMS
ADDITIONAL CONSIDERATIONS ESSENTIAL TO A SUCCESSFUL CONSERVATION PROGRAM
UTILITY-IMPLEMENTED PROGRAMS

UTILITY CONSERVATION PROGRAMS SPONSORED BY OTHER STATES

OVERVIEW

In keeping with Director Roberson's recommendation and motion, the committee has developed a condensed set of "Best Practices"[12] by state detailing the specifics as outlined in Director Roberson's motion. In keeping with the motion, the Executive Summary template outline provides: "Brief Program Summary, Target Customer Group, Education Efforts, Diagnostics, Implementation, Program Cost, Program Funding." A summary for each state is attached as Exhibit E.

Twenty-three states (some with multiple programs) are provided exhibiting a cross-section of programs:

California
Connecticut
Colorado
Delaware
Florida
Indiana
Iowa
Kansas
Maine
Maryland
Massachusetts
Minnesota
Missouri
New Jersey
New Hampshire
New York
Oregon
Pennsylvania
Texas
Utah
Vermont
Washington
Wisconsin

The programs reviewed provide a cross section of low-income programs, covering a variety of assistance options, and funded in a variety of methodologies. Since all the programs have proven successful in their program focus and some degree of success in their results, they provide a variety of options for the decision makers.

[12] The Task Force utilized the following research paper in developing our analysis: "Meeting Essential Needs: The Results of a National Search for Exemplary Utility-Funded Low-Income Energy Efficiency Programs," Martin Kushler, Ph.D., Dan York, Ph.D., Patti Witte, September 2005, Report U053, American Council for an Energy-Efficient Economy: http://treatsoftware.com/download/ACEEEAward.pdf

VALUE PROVIDED

Beyond the focus of reducing energy use and costs for low-and limited-income households, these programs yield numerous other benefits to household occupants, the communities and utility services providers. Successful programs can be structured under a variety of legislative or regulatory frameworks. Low-income energy efficiency programs can be developed and run under a variety of structures, and they can span a wide scope in terms of the size of the program and the types of services provided. While some of the exhibited programs apply to "energy reduction"; i.e., both gas and electric customers, our charge at this time is directed toward natural gas low-income consumers. Some electric programs are mentioned, as they provide a program template demonstrating how "successful" programs can operate regardless of energy source.

FUNDING CONSIDERATIONS

Analysis of the programs exhibited reveals a variety of funding options. The scope of the respective programs relates to the amount of funding necessary and how the funding would be provided. Some programs provide for "weatherization"; i.e., some form of reducing the amount of heating energy and cost necessary such as insulation, weather-stripping, computerized thermostats and energy use analysis. Other programs provide incentives for furnace replacement, while others assist in the replacement of appliances, and still others apply to all customers not exclusively "low-income."

WHAT MAKES A SUCCESSFUL PROGRAM?

The Task Force believes that the variety of programs provide a template of potential programs that could be utilized by the Authority. The programs provided comply with Task Force's instructions. The Task Force provides a buffet of potentially successful programs.

LESSONS LEARNED FROM OTHER STATE CONSERVATION PROGRAMS

The following is a summary[13] of the major "lessons learned" from the other states' conservation programs.

- Partnerships and multi-party collaborations are important. Bringing all stakeholders to the table is important to avoid duplication of effort, ensure maximum efficiency and achieve buy-in by potential partners. This includes state agencies involved in the weatherization assistance (WAP) and LIHEAP programs, utilities, local community action groups, utilities, local manufacturers (if possible) and private party contractors. In one state, the LIHEAP, WAP and conservation programs were not integrated, and this led to duplication of effort, less than optimum funding and some needy participants "falling through the cracks" between programs.
- Community action agencies provide direct customer services for many programs. Community action agencies are very close to consumers, and very attentive to their needs. Contractor qualification is provided, and even training in some cases. Quality control is important to ensure overall success.
- Single or "primary" providers of services are common. Single providers can often provide services more cost effectively than multiple providers. This also offers customers a "one-stop shop" for all services. Single providers also make data collection easier.
- Programs employ sophisticated diagnostics and analytical tools. Blower door testing, infrared diagnostics, software tools and "before and after" energy measurements are employed by the most effective programs. The "before and after" measurements of energy usage are critical to documenting benefits of the programs.
- Whole house approaches are common. Measures are not taken in isolation in the most effective programs. Using a whole house approach to analyzing energy and natural gas use also enables the most cost-effective measures to be employed first.
- Customer education is often an integral part of the services provided. The most effective programs employed an "in home" education and training service to educating consumers, making them more energy aware and aiding them in such tasks as programming the programmable thermostats. This helps to avoid the "blinking video player" syndrome.
- All types of energy are evaluated. While the existing task force is focusing on natural gas energy use, many measures, for instance wall insulation, will also directly impact electric cooling energy use as well as natural gas use.
- Programs include a "full menu" of household energy efficiency options. The most effective programs included both weatherization and appliance replacement options.
- The program needs quantitative goals and decision criteria. The most effective programs define and prioritize their objectives: energy savings first, cost effectiveness second and such.

[13] ACEEE Report U035, "Meeting Essential Needs: The Results of a National Search for Exemplary Utility-Funded Low-Income energy Efficiency Programs," September 2005

LESSONS LEARNED FROM OTHER STATE CONSERVATION PROGRAMS

- Programs have been achieving success. Not only energy use reductions, but cost savings, improved occupant comfort, indoor air quality, safety and health have been noted in many of the programs. In Pennsylvania, it was found that lowering energy bills of low-income customers made them more likely to resume paying their now affordable energy bills.

ADDITIONAL CONSIDERATIONS ESSENTIAL TO A SUCCESSFUL CONSERVATION PROGRAM

Positive Energy and Cost Savings Impact
The program in Tennessee should demonstrate an ability of the program to deliver significant energy and cost savings.

Evaluation of Results
The program should use a monitoring methodology that is easy to evaluate and verify to document savings impact and/or other beneficial effects achieved by the program which should be reported on a routine basis.

Qualitative Assessment
Achievements of the program in terms of noteworthy program implementation performance, innovation, customer participation, participant satisfaction, unique services and stakeholder support should also be reported on a routine basis.

Sunset Provision
Prudent program analysis described above should end the program when it has achieved its goals.

UTILITY-IMPLEMENTED PROGRAMS

The majority of natural gas utilities make available through bill inserts, mailings or information on their websites educational materials to empower the consumer to weatherize their homes. Programs range from providing energy-saving "tool kits" to the offer of rebates, although most rebates offered are targeted toward fuel switching. Florida's program, "Building a GoodCents Home," is designed to encourage the consumer to select contractors (new construction) that build GoodCents homes in compliance with the Florida Model energy Code. Arkansas Western Gas Company proposed a three year pilot program focusing on residential customers living in homes with natural gas service prior to 1990 and using at least 1,000 Ccf annually. Arkansas Western invested $250,000 annually that is administered through Community Action Agencies. The results of the program will be monitored before determining if the program should continue. Funding of the program is recoverable by the utility as an expense. Lost revenues associated with the resulting conservation will be addressed through a revenue adjustment mechanism, similar to a decoupling mechanism, depending upon the utility's earned rate of return.

Since early 2006, Piedmont Natural Gas Company Inc. has sponsored a variety of home energy conservation initiatives in the state of North Carolina. This year Piedmont contributed $300,000 towards a low-income weatherization assistance program administered by the North Carolina Office of Economic Opportunity. The target population for the project was Piedmont Natural Gas Company customers in North Carolina, with a priority placed on customers who have a high energy burden (15 percent and above) and are high energy users. The program funds the installation of energy efficiency measures in approximately 100 homes at an average cost of $3,000 per home. The primary installed measures are based on a comprehensive in-home energy audit. Based on the results of the audit, the measures to be installed are selected from a pre-set list that includes blown insulation of attic, insulation of side walls/floors/ducts, installation of a setback thermostat, and cleaning and tuning of heating and air systems. The program has an evaluation component, based on 12 months of pre- and post-weatherization bills of participating customers. For 2007 and 2008, Piedmont Natural Gas Company will also contribute to the development of a qualified contractor base on which this and other conservation programs rely on for implementation. Overall, Piedmont's funding of these and other conservation programs arose out of its settlement with the North Carolina Public Staff and Attorney General in its last rate case, whereby Piedmont was granted a Customer Utilization Tracker rate mechanism that essentially separates the collection of utility margin from customer gas consumption.

SECTION IV

LEGISLATION IN THE SOUTHEASTERN UNITED STATES ENCOURAGING ENERGY CONSERVATION

LEGISLATION

LEGISLATION IN THE SOUTHEASTERN UNITED STATES ENCOURAGING ENERGY CONSERVATION

There appears to be no real legislation either passed or pending in the southeastern United States that specifically addresses "Reduced Energy Conservation" initiatives relative to the residential and small commercial sector. There are, however, state energy programs in most of the southeastern states that address a limited scope of conservation.

Industrial Technologies Program
In 2005 Tennessee implemented an Industrial Technologies Program, an outreach program designed for manufacturing industries for introducing and implementing novel energy-savings. Florida, Georgia, North Carolina, South Carolina, Missouri, Alabama and Arkansas have similar ongoing projects.

Rebuild Alabama Multi-Family Initiative
Alabama implemented a "Rebuild Alabama Multi-Family Initiative" in 2003 as a special project. The project is designed to promote energy conservation in multi-family housing and universities. The target is a 10 percent utility savings through low-cost/no-cost maintenance procedures and education of staff to encourage energy efficient behavior.

Rebuild America Smart Schools
In 2002 Arkansas initiated a project to identify communities and school districts that have buildings of historical significance or to be constructed, and to turn these projects into high performance Rebuild America Smart Schools projects with reported square footage and energy savings.

Energy Efficiency in Public Facilities
The Governor of Louisiana enacted legislation supporting energy efficiency in public facilities.

Interagency Energy Policy Work Group
In 2001, Tennessee initiated a Work Group consisting of various state agencies charged with developing a set of policy recommendations regarding energy use, supply, sources, technologies and efficiency. The Work Group issued a report in 2002 that contained a set of recommendations. This report approached a state energy policy more from the standpoint of economic development and concentrated more on commercial and industrial users. Although not specifically targeting low income residential natural gas consumers, the report has been used in the past to address other energy efficiency initiatives in the state.

Sales Tax Holidays for the Purchase of Energy-Efficient Appliances
Two states in the southeastern United States, Georgia and Florida, have passed legislation that authorizes a state sales tax holiday (exemption) for the purchase of energy efficient products for a specific, but limited, period of time.

Georgia[14] held its second energy efficiency sales tax holiday this past August, and Florida[15] held its first energy efficiency sales tax holiday this past October during its "Energy Efficiency Week." The states have a similar policy in which the state sales tax was not collected on the sale of new energy-efficient appliances and other energy-efficient products priced at $1,500 or less. Specific products (dishwasher, clothes washer, air conditioner, ceiling fan, florescent light bulb, dehumidifier, programmable thermostat or refrigerator) were identified for the sales tax exemption, and minimum energy efficiency requirements, such as the ENERGY STAR program, were established. Proposals have been made to extend and expand the sales tax holiday, such as offering the sales tax holiday twice a year (summer and winter) and including additional energy-efficient products.

The sales tax holiday not only provides citizens with instant savings when purchasing energy efficient products; it also serves as a way to educate citizens on the availability of energy efficiency products and the benefits associated with them, such as saving energy and reduced energy costs.

[14] See Exhibit B "Georgia Sales Tax Holiday."

[15] See Exhibit C, "Florida's Energy Efficient Week," and Exhibit D, "Florida Tax Information," for information about those states' sales tax holidays for the purchase of energy-efficient appliances.

SECTION V

PROCEDURAL COURSE & POLICY CHANGES

PROCEDURAL COURSE AND POLICY CHANGES

The Task Force would urge the Authority to consider the recommendations herein and the various procedural options available to implement a home energy conservation program. There remain several issues as to the mechanics of the program that require further study and discourse. These issues include the extension of conservation policy to other forms of energy outside of natural gas where feasible. Therefore, the Task Force recommends extending the timeframe for completion of a conservation program and to broaden the scope of the Task Force's examination of conservation initiatives. This would allow the Task Force to continue to meet and more thoroughly design a working conservation policy to benefit the State of Tennessee. The Task Force has covered much ground and established a broad consensus with a healthy rapport. That dialogue should continue. Other procedural options the Authority could consider are a rule-making proceeding or a generic docket. However, the Task Force would recommend additional time to continue the present course toward designing a pilot weatherization program and further policy initiatives.

SECTION VI

EXHIBITS

A. DIRECTOR ROBERSON'S MOTION, JULY 24, 2006
B. LEGISLATION CREATING GEORGIA'S SALES TAX HOLIDAY FOR ENERGY-EFFECIENT APPLIANCES
C. FLORIDA ENERGY EFFECIENT WEEK
D. TAX INFORMATION ABOUT FLORIDA'S SALES TAX HOLIDAY FOR ENERGY-EFFECIENT APPLIANCES
E. OTHER STATE PROGRAMS (23)

MOTION TO APPOINT A TASK FORCE TO STUDY AND RECOMMEND A STATEWIDE HOME ENERGY CONSERVATION PLAN

In less than five months winter begins. If recent history repeats itself, Tennessee consumers can again expect to pay higher than normal natural gas prices. The convergence of circumstances beyond our control such as increased demand, tight supplies and cold weather has the chilling effect of spiking natural gas prices. While the expected high natural gas price of the commodity is beyond the control of the local gas companies and the TRA, I would like to discuss with you some policy options that may be available to the TRA to help mitigate the financial impact of the natural gas prices on residential consumers.

First, I want to commend you for the pro-consumer actions you took last year to provide protection to consumers during the winter heating season and to Governor Bredesen for his "Warm Homes Tennessee" initiative. Because of these proactive actions, many consumers were able to keep their natural gas on by making payment arrangements with the local gas companies. While the action of the TRA last year may be needed again this winter, I come to you today to suggest a new approach. I recommend that we begin the process to institute a statewide home energy conservation program within the counties served by the regulated local natural gas companies. While our jurisdiction does not permit us to regulate the cost of the commodity or initiate dramatic actions that would spur an increase in exploration or expand capacity of natural gas, we can lead the charge in increasing the public awareness of the need to conserve home energy and establish partnerships with various stakeholders to offer common sense conservation measures that will better enable consumers to afford to heat their homes with natural gas this winter. Conservation is good public policy.

Ben Franklin, that icon of early American history, once said that a "penny saved is a penny earned." The idea is simple and has application to the situation we face with high natural gas prices. Conservation has the benefit of reducing the use of natural gas thereby saving consumers money that they can use to buy other essentials. But energy conservation is more than simply turning down your thermostat when the weather is cold; it also includes tightening up our homes to reduce energy loss. Unfortunately, many consumers may not either be aware of how energy conservation can benefit them or can't afford the expense of improving the energy efficiency of their home. While energy conservation has tangible benefits for consumers it can also benefit the local gas companies. This is a win-win situation for local gas companies as well because if consumers can better afford to pay their gas bills, the percentage of bad debt is likely to be reduced.

While we have all heard presentations at NARUC and in other forums of conservation measures that work, I do not wish to prescribe nor portray that I know the plan that will work best in Tennessee. For this reason, I move that we establish a task force that will review other conservation plans adopted in other states or by the industry and the specific needs in Tennessee and bring back to us its recommendations. As a start, I can think of the following three (3) broad areas that the Task Force should at a minimum consider: Education, Diagnostics and Remediation.

I further move that this Task Force recommend to us a research funding component. In the laboratories across our nation, scientists and engineers are diligently working to find new ways to improve efficiency of natural gas appliances. I cannot help but to speculate that much of this work would please Ben Franklin, the inventor of the Franklin wood-burning stove. It is my belief that Tennessee needs to be a contributor and supporter of this worthwhile research of natural gas efficiency and not just a benefactor of the results. The task force should research how best to support and fund such efforts and bring to us its recommendations.

The recommendations of the task force shall be presented to us by November 10, 2006 in the form of a report. I know this is an ambitious target date but it is one that will hopefully allow us to deliberate and decide on a Home Energy Conservation and Research Plan before the coming winter.

Who should be on the task force? In my mind, the task force should include a representative cross section of various stakeholders. Such a diverse mix of individuals should serve well the objective of coming up with the best plan. On the members of the task force, I seek your input. To begin with I have a suggestion to name one person from the following organizations to the task force.

Attorney General Office of Consumer Protection Division
Atmos Energy Company
Chattanooga Gas Company
Piedmont Gas Company
Tennessee Department of Human Services
AARP
Kilowatt Ours Initiative
University of Tennessee – Energy, Environment and Resources Center
Gas Technology Institute
NRRI
TRA Division of Competitive Markets and Policy Division

Since this task force is likely to recommend public policy to us, I suggest that Chief Carsie Mundy be appointed as chair of the task force and that he be able to draw from other TRA divisions the support he feels is needed to accomplish the mission of the task force.

In closing, I also want to commend the local gas companies for their efforts to institute low-income natural gas programs. I especially want to recognize Chattanooga Gas for its recent efforts. But I believe we don't need to have a hodge-podge approach of multiple plans but a statewide plan. And it is likely that this statewide plan may need to be codified in rules of the agency. Such a statewide plan will ensure that all customers of regulated gas companies will have access to the benefits of a home energy conservation plan.

I recognize that the Agency now has a company-specific plan before us in Docket 06-00175. The panel in that docket will need to address how best to proceed in light of these efforts to develop a state-wide plan. I will have a recommendation as to how to do that at a future conference.

I am ready to discuss my motion.

Thank you.

House Bill 559 (AS PASSED HOUSE AND SENATE)

By: Representatives Smith of the 70th, Ehrhart of the 36th, Jones of the 46th, Graves of the 12th, and Fleming of the 117th

A BILL TO BE ENTITLED

AN ACT

To amend Code Section 48-8-3 of the Official Code of Georgia Annotated, relating to exemptions from state sales and use tax, so as to provide for an exemption from state sales and use tax only with respect to certain sales of certain energy efficient products for a limited period of time; to provide for a definition; to provide for conditions and limitations; to provide an effective date; to repeal conflicting laws; and for other purposes.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF GEORGIA:

SECTION 1.

Code Section 48-8-3 of the Official Code of Georgia Annotated, relating to exemptions from state sales and use tax, is amended by striking "or" at the end of paragraph (79), by striking the period at the end of paragraph (80) and inserting in its place "; or", and by adding a new paragraph immediately following paragraph (80) to be designated paragraph (81) to read as follows:

"(81)(A) Purchase of energy efficient products with a sales price of $1,500.00 or less per product purchased for noncommercial home or personal use. The exemption provided by this paragraph shall apply only to sales occurring during a period commencing at 12:01 A.M. on October 6, 2005, and concluding at 12:00 Midnight on October 9, 2005.

(B) For the purposes of this exemption, an energy efficient product is any dishwasher, clothes washer, air conditioner, ceiling fan, incandescent or flourescent light bulb, dehumidifier, programmable thermostat, or refrigerator, the energy efficiency of which has been designated by the United States Environmental Protection Agency and the United States Department of Energy as meeting or exceeding each such agency´s energy saving efficiency requirements or which have been designated as meeting or exceeding such requirements under each such agency´s Energy Star program.

(C) The exemption provided for in subparagraph (A) of this paragraph shall not apply to purchases of energy efficient products purchased for trade, business, or resale.

(D)(i) For the purposes of this paragraph, the term 'local sales and use tax' shall mea any sales tax, use tax, or local sales and use tax which is levied and imposed in an area consisting of less than the entire state, however authorized, including, but not limited to, such taxes authorized by or pursuant to constitutional amendment; by or pursuant to Section 25 of an Act approved March 10, 1965 (Ga. L. 1965, p. 2243), as amended, the 'Metropolitan Atlanta Rapid Transit Authority Act of 1965'; by or pursuant to Article 2 of this chapter; by or pursuant to Article 2A of this chapter; by or pursuant to Part 1 of Article 3 of this chapter; by or pursuant to Part 2 of Article 3 of this chapter; by or pursuant to Article 4 of this chapter.

(ii) The exemption provided for in subparagraph (A) of this paragraph shall not apply to any local sales and use tax levied or imposed at any time.

(E) The commissioner shall promulgate any rules and regulations necessary to implement and administer this paragraph.″

SECTION 2.

This Act shall become effective July 1, 2005.

SECTION 3.

All laws and parts of laws in conflict with this Act are repealed.

Exhibit C

JEB BUSH
GOVERNOR OF THE STATE OF FLORIDA

Energy Efficient Week

WHEREAS, Florida's electric consumption is expected to increase by almost 30 percent over the next ten years; and

WHEREAS, this anticipated growth in energy consumption and the unprecedented 2004 and 2005 storm seasons underscore our vulnerability to interruptions in fuel production, supply and delivery; and

WHEREAS, conserving energy and implementing clean practices are the quickest and most cost effective ways to preserve Florida's energy supply and the environment; and

WHEREAS, in 2005, Americans saved $12 billion on their utility bills using Energy Star, a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that helps citizens save money and protect the environment through energy efficient products and practices; and

WHEREAS, the 2006 Florida Energy Act is a four-year, $100 million plan to diversify the state's fuel supply and promote energy conservation and efficiency; and

WHEREAS, the 2006 Florida Energy Act designated October 5-11, 2006 as a sales tax holiday for purchasing energy efficient appliances and products;

NOW, THEREFORE, I, Jeb Bush, Governor of the state of Florida, do hereby extend greetings and best wishes to all observing October 5 - 11, 2006 as Energy Efficient Week.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the state of Florida to be affixed at Tallahassee, the Capital, this 4th day of October in the year two thousand six.

Jeb Bush

GOVERNOR

FLORIDA DEPARTMENT OF REVENUE

T·I·P
Tax Information Publication

TIP # 06A01-21
Date Issued:
08/28/06

www.myflorida.com/dor

Inside this TIP:

Sales Tax Holiday for New Energy-Efficient Products

October 5 through October 11, 2006

Florida law provides that no sales tax or discretionary sales surtax (also known as local option sales tax) will be collected on qualifying sales of **new** energy-efficient products having a sales price of **$1,500 or less**. This exemption is effective from **12:01 a.m., October 5, 2006, through 11:59 p.m., October 11, 2006**.

A qualifying "energy-efficient product" is defined by Florida law as only **a dishwasher, clothes washer, air conditioner, ceiling fan, incandescent or fluorescent light bulb, dehumidifier, programmable thermostat, or refrigerator** that has been designated as meeting or exceeding the federal Energy Star Program energy-efficiency requirements and has the Energy Star label affixed to the product or product packaging. The qualifying product must be new when sold.

The sales tax exemption applies only to items purchased for **noncommercial home or personal use**, and does not apply when the product is purchased for trade, business, or resale. Purchases made using a business or company credit or debit card or check are NOT eligible for this exemption.

Example 1: A used appliance dealer sells a used late model refrigerator for $700. The Energy Star label is still attached to the product. Since this is not a **new** appliance, the sale is subject to tax.

Example 2: A developer purchases 25 refrigerators at $800 each and 25 dishwashers at $500 each for use in residential homes that the developer has built. The products carry the Energy Star label and are billed on the same invoice. Since the purchase is not for noncommercial or personal use, the purchase is subject to tax.

Example 3: A purchaser buys a dishwasher for $500, an electric range for $600, and a window for $300. The dishwasher and window carry the Energy Star label. All three items are billed on the same invoice. Only the dishwasher qualifies for the exemption. The electric range does not carry the Energy Star label. The electric range and window are not on the list of eligible items.

Applying the law to sales transactions

Purchases of multiple items at one time

The sales price of each eligible item will determine whether that item exceeds the amount allowable for exemption, regardless of whether other items are included on the same sales invoice.

Example: A customer purchases a refrigerator, a dishwasher, and a lawn mower on one sales invoice during the exemption period. The refrigerator and dishwasher both carry the Energy Star label. The sales price of the refrigerator is $1,400, the dishwasher is $1,000, and the lawn mower is $500. Both the refrigerator and dishwasher qualify for the exemption because the sales price of each qualifying product is $1,500 or less. The lawn mower is not included in the list of eligible items and is taxable.

Buy one get one free or for a reduced price

The total price of items advertised as **"buy one, get one free,"** or **"buy one, get one for a reduced price,"** cannot be averaged together in order for both items to qualify for the exemption.

Example: A retailer advertises dishwashers for half price when purchased with a refrigerator. A customer purchases a refrigerator for $1,600 and a dishwasher for $300 (normally priced at $600). Both products carry the Energy Star label. The dishwasher will qualify for the exemption, but the refrigerator will not qualify because the sales price exceeds $1500. In this example, the sales price of the two products may not be averaged together so that both products will qualify for the exemption.

Gift certificates and gift cards

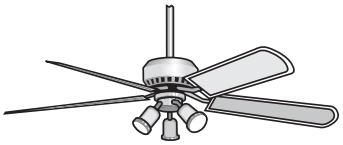
The sale of a **gift certificate** or **gift card** is not taxable. Eligible items purchased during the exemption period using a gift certificate or gift card will still qualify for the exemption, regardless of when the gift certificate or gift card was purchased. Eligible items purchased after the exemption period using a gift certificate or gift card are **taxable** even if the gift certificate or gift card was purchased during the exemption period. A gift certificate or gift card **CANNOT** be used to reduce the selling price of an item in order to qualify for the exemption.

Example: A customer purchases an air conditioner carrying the Energy Star label during the exemption period. The sales price of the air conditioner is $1,600. The customer has a gift card for $150 that he uses toward payment of the purchase. The gift card does not reduce the sales price of the air conditioner and the sale does not qualify for the exemption.

Exchanges, store credits, and returns

When a customer purchases a qualifying item during the exemption period, then later **exchanges** the item for the same item (different model, different color, etc.), no tax will be due even if the exchange is made after the exemption period.

Example 1: A customer purchases a dishwasher carrying the Energy Star label during the exemption period. The sales price of the dishwasher is $600 and the customer pays no sales tax on the purchase. After the exemption period, the customer exchanges the dishwasher for a second dishwasher that has the Energy Star label with a sales price of $600. The second dishwasher is a different brand and model number. The exchange will qualify for the exemption because it is an exchange of a qualifying item for the same item (i.e., same appliance type and same price).



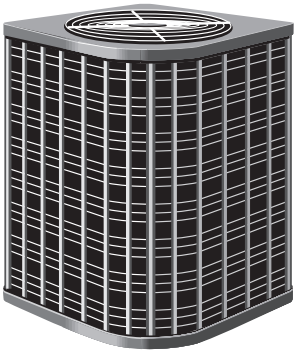
Example 2: Same facts as above, but the customer exchanges the dishwasher for a refrigerator that has the Energy Star label with a sales price of $600. This exchange will not qualify for exemption because the customer has not exchanged a qualifying item for the same item.

When a customer uses a **store credit** during the exemption period to purchase qualified tax-exempt items, the purchase will be exempt from sales tax. When a customer receives a store credit during the exemption period and uses the credit after the tax-exempt period has expired, the appropriate sales tax will apply to the full sales price of the newly purchased item.

A customer who pays sales tax to a retailer on a qualifying item when no tax is due must secure a **refund** of the tax from the retailer and not from the Department of Revenue.

Coupons, rebates, and rain checks

Manufacturer's coupons do not reduce the sales price of an item. Therefore, a manufacturer's coupon cannot be used to reduce the selling price of a qualifying item in order for the item to qualify for the exemption.



Example: A refrigerator that carries the Energy Star label sells for $1,600. The customer has a $100 manufacturer's coupon good for the purchase of the refrigerator. The manufacturer's coupon does not reduce the sales price of the refrigerator. Tax is due on $1,600, even though the customer only pays the retailer $1,500 for the refrigerator.

Store coupons and discounts reduce the sales price of an item. Therefore, a store coupon or discount can be used to reduce the sales price of a qualifying item to the qualifying amount in order to qualify for the exemption.

Example: A clothes washer that carries the Energy Star label sells for $1,600. The store offers a discount of 10% on the clothes washer, so that the customer pays $1,440 for the clothes washer. The clothes washer would be eligible for the exemption because the store discount reduces the sales price below $1,500.

Rebates occur after the sale and do not affect the sales price of an item purchased.

Example: A customer purchases an air conditioner carrying the Energy Star label for $1,600 during the exemption period. The air conditioner comes with a manufacturer's rebate of $150. The rebate does not reduce the sales price of the air conditioner to the allowable amount and the exemption would not apply.

Eligible items purchased during the exemption period using a **rain check** will qualify for the exemption regardless of when the rain check was issued. However, issuance of a rain check during the exemption period will not qualify an eligible item for the exemption if the item is actually purchased after the exemption period.

Layaways, mail orders (including Internet orders), and shipping charges

A **layaway** sale is a transaction in which merchandise is set aside for future delivery to a customer who makes a deposit, agrees to pay the balance of the purchase price over a period of time, and receives the merchandise at the end of the payment period. For purposes of this exemption, qualified items will be eligible for the exemption if a retailer and a customer enter into a contract for a layaway sale during the exemption period, the customer makes the usual deposit in accordance with the retailer's layaway policy, and the merchandise is segregated from the retailer's inventory. Also, if the final payment on a layaway order is made and the merchandise is given to the customer during the exemption period, that sale of qualified items will be eligible for the exemption, even when the qualified items were placed on layaway before the exemption period.

Example 1: A clothes washer with a sales price of $1,100 is placed on layaway during the exemption period. The clothes washer carries the Energy Star label. The customer makes the usual deposit in accordance with the retailer's layaway policy, and the clothes washer is segregated from the retailer's inventory. The sale of the clothes washer will be eligible for the exemption.

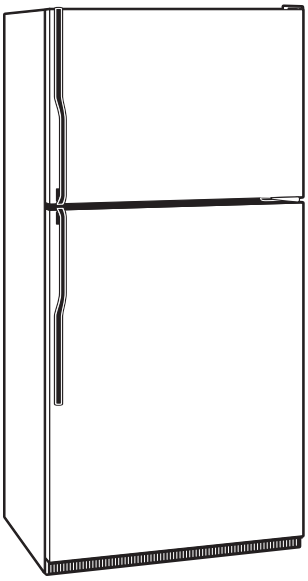
Example 2: Same facts as example 1, above, except that the clothes washer is placed on layaway prior to the exemption period. The customer makes the final payment for the layaway during the exemption period and receives the clothes washer. The sale of the clothes washer will be eligible for the exemption.

For purposes of this exemption, eligible items purchased by **mail order** (including transactions made over the Internet) will receive the exemption if the order is accepted by the mail-order company during the exemption period for immediate shipment. When the acceptance of the order by the mail-order company occurs during the exemption period, the exemption will apply even if delivery is made after the exemption period.

An order is accepted by the mail-order company when the mail-order company has taken an action to fill the order for immediate shipment. Actions to fill an order include placing an "in-date" stamp on a mail-order or assigning an "order number" to a telephone order.

An order is considered to be for immediate shipment when delayed shipment is not requested by the customer. An order is for immediate shipment notwithstanding that the shipment may be delayed because of a backlog of orders or because stock is currently unavailable to, or on back order by, the company.

Shipping charges are included as part of the sales price of an eligible item, if the customer has no option to avoid having the item shipped, whether or not the shipping charges are separately stated. In such cases, the shipping charges become a part of the sales price and the qualifying item will be eligible for exemption only if the sales price of the item combined with the shipping charges is $1,500 or less. If the customer has the option of whether to have the item shipped and the shipping charges are separately stated, then the shipping charges are not included in the sales price.



If multiple items are shipped on a single invoice, to determine if any items qualify for the exemption, the shipping charge must be proportionately allocated to each item ordered and separately identified on the invoice.

Example 1: An air conditioner that carries the Energy Star label sells for $1,450. A customer orders the air conditioner and is charged $75 for shipping and handling. The customer has no option whether to have the air conditioner shipped. This sale will not qualify for the exemption because the shipping charges are included as part of the sales price and the sales price exceeds $1,500.

Example 2: Same facts as Example 1, except that the air conditioner sells for $1,405. In this case, the sale will qualify for exemption. The shipping charges are included in the sales price, but the addition of the shipping charges does not cause the sales price to exceed the amount allowable for the exemption.

Example 3: Same facts as Example 1, except that the customer has the option whether to have the air conditioner shipped. In this case, the shipping charges will not be included in the sales price if the shipping charges are separately stated on the customer's invoice. If the shipping charges are separately stated on the customer's invoice, the sale would qualify for the exemption.

Example 4: A customer orders a dishwasher and a refrigerator on the same invoice. Both items will be shipped to the customer, and the customer has no option whether to have the items shipped. The sales price of the dishwasher is $500 and the sales price of the refrigerator is $1,450. The total shipping charge for both items is $150.

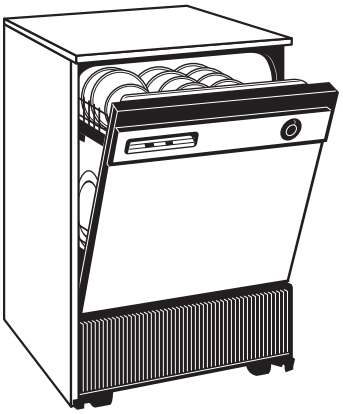
To determine whether either item is eligible for the exemption, the shipping charge must be proportionately allocated to each item and separately identified on the invoice. In this example, the invoice must contain a shipping charge of $38.46 [$500/$1,950 (cost of dishwasher/cost of both items) = 25.64%, multiplied by $150 (cost of shipping)] for the dishwasher and a shipping charge of $111.54 for the refrigerator. Therefore, the total sales price of the dishwasher is $538.46 and the total sales price of the refrigerator is $1,561.54. The dishwasher would qualify for the exemption and the refrigerator would not because it exceeds $1500.

Energy-efficient products installed as tangible personal property by the seller

When a qualifying energy-efficient product does not become a part of realty and remains tangible personal property when installed, any separately itemized charge for the installation of the product is a part of the sales price of the product and is exempt when the total sales price of the product is $1,500 or less.

Example: A refrigerator, which carries the Energy Star label, is purchased for $1,300 and an installation charge of $150 is separately itemized on the seller's invoice. The refrigerator will remain tangible personal property when installed by the seller. The purchase would qualify for the exemption because the sales price of the refrigerator ($1,300 plus $150 in installation charges) is less than $1,500.

Contractors who install energy-efficient products as real property improvements

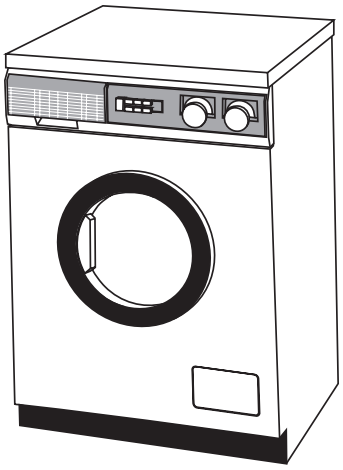


The taxability of a qualifying energy-efficient product that will be installed by the seller or by a contractor is based on whether the sale of the qualifying product is a retail sale to a consumer for noncommercial home and personal use or a sale to the contractor to be used in the performance of a real property improvement contract.

Real Property Improvement Contracts

When a contractor enters into any type of **real property improvement contract**, except a retail sale plus installation contract, under which the contractor agrees to furnish the materials and supplies and necessary services in exchange for an agreed price, the contractor is the ultimate consumer of any energy-efficient product used in performing the contract. Even though the purchaser has paid the contractor an agreed price for the improvement to realty, the contractor remains the ultimate consumer of the energy-efficient product. Therefore, the product is purchased for commercial use and does not qualify for the exemption.

Example: A purchaser enters into a contract with an air conditioner contractor to furnish and install an air conditioner that will become a part of realty for $1,450. The air conditioner carries the Energy Star label. The purchase of the air conditioner would not be considered a retail sale for noncommercial use because the contractor is considered to be the ultimate consumer of the air conditioner in the performance of the contract. The purchase of the air conditioner by the contractor to be installed as real property for the purchaser **does not qualify** for exemption.



Retail Sale Plus Installation Contracts

When a contractor enters into a **retail sale plus installation contract**, the contractor agrees to sell an item and agrees to install the item as an improvement to real property, the contractor is selling tangible personal property. Under such contracts, every item or piece of material (e.g., screws, caulk, tape, etc.) to be used in the installation and the installation charge is required to be separately itemized and priced on the invoice to the purchaser. The purchaser must assume title and risk of loss of the items when they are delivered to the purchaser.

When a qualifying energy-efficient product is sold by a contractor under a retail sale plus installation contract to a purchaser for noncommercial home and personal use, the sale of the product with a sales price of $1,500 or less is exempt.

Example: A contractor enters into a retail sale plus installation contract with a purchaser to furnish an air conditioner, plus all materials necessary to install the air conditioner as an improvement to realty at the purchaser's residence. The air conditioner carries the Energy Star label. The sales price to the consumer for the air conditioning unit is $1,250, the charge for the separately itemized materials total $250, and the installation charge is $300. The total charge to the consumer is $1,800. Because the sale of the air conditioner is the sale of a qualifying energy-efficient product to a purchaser for noncommercial or personal use and the sale is less than $1,500, the sale of the air conditioner is exempt. The sale of the separately itemized materials is subject to tax. The separately itemized charge for installation is not subject to tax.

Rentals and Repairs

Rental of any of the items specified in this publication does not qualify for an exemption.

Repairs to qualifying items do not qualify for the exemption.

Service Warranties

The taxation of any charges for a **service warranty** contract will depend upon the taxability of the product being sold. For example: a refrigerator carrying the Energy Star label is purchased for $1,495 and a $100 charge is made for a service warranty contract at the time of sale and is separately stated on the seller's invoice. The purchase of the refrigerator would qualify for the exemption because the sales price of the refrigerator is less than $1500. The $100 charged for the service warranty contract is also exempt because the retail sale of the refrigerator is exempt from tax.

For Bay County Dealers Only

Panama City and Panama City Beach impose upon retailers a merchant's license fee or similar gross receipts tax or fee, which may be passed on to the customer. The merchant's license fee is included in the sales price of each item whether or not the fee is separately stated on the invoice.

Example: A refrigerator that has the Energy Star label sells for $1,495.00. The separately stated 1% gross receipts fee for this item is $14.95. Since the gross receipts fee is part of the sales price of the item ($1,509.95), the cost of the refrigerator exceeds the allowable cost threshold and, therefore, **will not** qualify for the tax exemption.

No special record keeping or reporting is necessary.

Dealers are not required to obtain an exemption certificate on sales of energy-efficient products during the exemption period. However, the dealer's records must clearly identify the type of product sold, the date on which the product was sold, the sales price of each, and any sales tax charged.

Sales of eligible items that are sold tax exempt from October 5, 2006 through October 11, 2006, should be reported as exempt sales on the appropriate sales tax return for that period.

Reference: Ch. 2006-230, L.O.F.

Consolidated Accounts

If you are a consolidated filer, and one or more of your active locations have a Department of Revenue Business Classification and an assigned Standard Industrial Code to indicate that you sell any of these qualifying products, your consolidated account will receive ONE copy of this TIP. This will enable you to communicate this information directly with each of your store locations. Please make certain you notify ALL of your individual store locations that may sell any of the eligible products regarding this Energy Sales Tax Holiday and the specific provisions contained in this TIP. Copies of this information are available on our Internet site at **www.myflorida.com/dor**.

For Information and Forms

Information and forms are available on our Internet site at

www.myflorida.com/dor

To speak with a Department of Revenue representative, call Taxpayer Services, Monday through Friday, 8 a.m. to 7 p.m., ET, at 800-352-3671 *or* 850-488-6800.

Persons with hearing or speech impairments may call the TDD line at 800-367-8331 *or* 850-922-1115.

For a written reply to **tax questions**, write:
Taxpayer Services
Florida Department of Revenue
1379 Blountstown Hwy
Tallahassee FL 32304-2716

To receive forms by mail:

- Order multiple copies of forms from our Internet site at **www.myflorida.com/dor/forms** *or*
- Fax **form requests** to the DOR Distribution Center at 850-922-2208 *or*
- Mail **form requests** to:
  Distribution Center
  Florida Department of Revenue
  168A Blountstown Hwy
  Tallahassee FL 32304-2702

Department of Revenue service centers host educational seminars about Florida's taxes. To get a schedule of upcoming seminars or to register for one,

- Visit us online at **www.myflorida.com/dor** *or*
- Call the service center nearest you.

Florida Department of Revenue Service Centers

Alachua Service Center
14107 US Highway 441 Ste 100
Alachua FL 32615-6390
386-418-4444 (ET)

Clearwater Service Center
Arbor Shoreline Office Park
19337 US Highway 19 N Ste 200
Clearwater FL 33764-3149
727-538-7400 (ET)

Cocoa Service Center
2428 Clearlake Rd Bldg M
Cocoa FL 32922-5731
321-504-0950 (ET)

Coral Springs Service Center
Florida Sunrise Tower
3111 N University Dr Ste 501
Coral Springs FL 33065-5090
954-346-3000 (ET)

Daytona Beach Service Center
1821 Business Park Blvd
Daytona Beach FL 32114-1230
386-274-6600 (ET)

Fort Myers Service Center
2295 Victoria Ave Ste 270
Fort Myers FL 33901-3871
239-338-2400 (ET)

Fort Pierce Service Center
Benton Building
337 N US Highway 1 Ste 207-B
Fort Pierce FL 34950-4255
772-429-2900 (ET)

Hollywood Service Center
Taft Office Complex
6565 Taft St Ste 300
Hollywood FL 33024-4044
954-967-1000 (ET)

Jacksonville Service Center
921 N Davis St A250
Jacksonville FL 32209-6829
904-359-6070 (ET)

Key West Service Center
3118 Flagler Ave
Key West FL 33040-4602
305-292-6725 (ET)

Lake City Service Center
1401 W US Highway 90 Ste 100
Lake City FL 32055-6123
386-758-0420 (ET)

Lakeland Service Center
230 S Florida Ave Ste 101
Lakeland FL 33801-4625
863-499-2260 (ET)

Leesburg Service Center
1415 S 14th St Ste 103
Leesburg FL 34748-6686
352-315-4470 (ET)

Maitland Service Center
Ste 160
2301 Maitland Center Parkway
Maitland FL 32751-4192
407-475-1200 (ET)

Marianna Service Center
4230 Lafayette St Ste D
Marianna FL 32446-8231
850-482-9518 (CT)

Miami Service Center
8175 NW 12th St Ste 119
Miami FL 33126-1828
305-470-5001 (ET)

Naples Service Center
3073 Horseshoe Dr S Ste 110
Naples FL 34104-6145
239-434-4858 (ET)

Orlando Service Center
AmSouth Bank Building
5401 S Kirkman Rd 5th Floor
Orlando FL 32819-7911
407-903-7350 (ET)

Panama City Service Center
703 W 15th St Ste A
Panama City FL 32401-2238
850-872-4165 (CT)

Pensacola Service Center
3670C N L St
Pensacola FL 32505-5217
850-595-5170 (CT)

Port Richey Service Center
6709 Ridge Rd Ste 300
Port Richey FL 34668-6842
727-841-4407 (ET)

Sarasota Service Center
Sarasota Main Plaza
1991 Main St Ste 240
Sarasota FL 34236-5940
941-361-6001 (ET)

Tallahassee Service Center
2410 Allen Rd
Tallahassee FL 32312-2603
850-488-9719 (ET)

Tampa Service Center
Ste 100
6302 E Martin Luther King Blvd
Tampa FL 33619-1166
813-744-6344 (ET)

West Palm Beach Service Center
2468 Metrocentre Blvd
West Palm Beach FL 33407-3105
561-640-2800 (ET)

CT—Central Time
ET—Eastern Time

California
"Direct Assistance Program" – Southern California Gas Company

I. Brief Program Summary

Southern California Gas Company's "Direct Assistance Program (DAP) is a utility-based Low-Income Energy Efficiency Programs that leverages the California Weatherization Program.

DAP provides no-cost weatherization and furnace repair or replacement services (homeowners only) for qualified limited-income customers. Measures include: ceiling insulation, door weather-stripping, caulking, low flow shower heads, water heater blankets, evaporative cooler covers and a/c covers, switch and outlet gaskets and covers, pipe insulation, faucet aerators, minor repairs to exterior doors and/or windows, energy education, and furnace repair or replacement services (homeowners only)

In 2003, SoCalGas weatherized a total of 47,673 homes, provided in-home energy education to 47,370 customers and/or households, repaired 546 furnaces, and replaced 4,252 furnaces and 4,708 water heaters.

A. Target Consumer Group

California Low Income Energy Efficiency Programs serve customers at or below 200% of federal poverty guidelines. The program has elements that address single-family, multi-family and mobile homes. It includes both owners and renters and participants receive all feasible measures for which they qualify.

B. Education Efforts

In-home energy education is provided to customers when their homes are weatherized. In 2003, approximately 20,035 customers received energy education through 917 community workshops. The SoCal Gas Training Center provided 28 training classes to 281 students during 2003. A total of 33,100 CO tests were conducted.

2001 educated 32,869 customers

2002 *

2003 educated 47,370 customers

2004 educated 66,000 customers

C. Diagnostics

In 2003, DAP exceeded the required threshold savings of 458,580 therms through the installation of basic ("Big Six"1 measures to qualify for $644,571 in program incentives. DAP achieved a total of 583,776 therms in 2003.

That therm savings qualifies the utility for an incentive claim totaling $644,571 (2 percent of 2003 program expenditures). In addition the utility can claim interest, franchise fees, and uncollectibles for the first year; and interest, franchise fees, and uncollectibles for the second year.

D. Cost

2003 Budget	
Gas Appliances	$ 9,867,077
Weatherization	$ 20,295,092
Outreach & Assessment	$ 5,200,929
In Home Energy Education	$ 1,399,591
Energy Efficiency Total	$ 36,782,690
Program Cost	$ 1,593,903
Total Costs	$ 38,376,593

TENNESSEE HOME ENERGY CONSERVATION TASK FORCE

Executive Summary - State of California

Weatherization Program

I. Brief Program Summary

California Weatherization Program (WP) is an element of the Low Income Home Energy Assistance Program (LIHEAP) Block Grant funded by the federal Department of Health and Human Services (DHHS). The program is delivered through a network of forty-one (41) community and local government agencies.

The Weatherization program was passed in 1990 in SB 845, and amended by AB 1393, effective January 1, 2000. These statutes direct the public utility commission to require gas and electric corporations to perform home weatherization services for low-income households, and define those services to include the following "Big Six" measures: (1) attic insulation; (2) caulking; (3) weather stripping; (4) low-flow showerheads; (5) water heater blankets and (6) door and building envelope repairs to reduce infiltration.

The statute directs the utilities to provide as many of these Big Six measures as feasible for each eligible low- income dwelling unit. Weatherization services may also include other building conservation measures, energy efficiency appliances and energy education programs determined by the regulatory commission to be feasible.

Qualifying participants receive energy education, weatherization and energy efficient appliances.

Under this program, the independent owned utilities work through local agencies and organizations and other leverage with state and federal programs.

A. Target Consumer Group:

The California Low Income Energy Efficiency Program serves customers at or below 200% of federal poverty guidelines. The program has elements that address single-family, multi-family and mobile homes. It includes both owners and renters and participants receive all feasible measures for which they qualify.

Low-Income Households in CA: 3,072,625

CA Households Served in 2005: 215,029

Percentage of CA Low-Income Households Served: 7%

B. Education Efforts

Published articles, community outreach to augment utility efforts and Weatherization Day activities. In 2004, for example the WP printed and distributed 50,000 books Energy Bears Coloring and Activity Book.

C. Diagnostics

D. Implementation

Program start date: The Weatherization program was passed in 1990 in SB 845, and amended by AB 1393, effective January 1, 2000

Participants: From 2000-2004 a total of 19,324 households have participated with $26,823947 in DOE funding. WP served 4,016 households in 2004.

Annual energy savings achieved: In 2005 DOE WP cost an average $1,156 per home and yielded a $300 savings that transfers to a 20 percent cost reduction.

Oversight: Seven (7) members Oversight Board appointed in 2002 to:

- Monitor and evaluate implementation of all low-income programs
- Assist in the development and analysis of any low-income assessment energy needs
- Encourage collaboration between state and utility programs to maximize the leverage available funds for low-income energy customers.
- Provide to the Legislature reports: assessment of needs, audits, and analysis of program implementation
- Streamline application and enrollment processes
- Encourage the usage of the network of community service providers

E. Cost:

From 2000-2004 the program spent $26,823,947 in DOE block grant funding.

F. Funding:

California Weatherization Program (WP) is an element of the Low Income Home Energy Assistance Program (LIHEAP) Block Grant funded by the federal Department of Health and Human Services (DHHS).

Exhibit E2

Executive Summary - State of Colorado
"Energy Saving Partners"
Docket No. 05A-515EG

I. Brief Program Summary

In cooperation with Xcel Energy and Energy Outreach Colorado, OEMC funds the Energy $aving Partners (ESP) program, which provides Weatherization services. ESP provides cost-effective energy efficient upgrades to qualifying Coloradans and has weatherized more than 60,000 Colorado homes since 1976, completing over 3,000 homes each year.

A. Target Consumer Group

ESP is a demand side management (DSM) program designed to provide assistance to low-income members of the residential class of customers by making their home more energy efficient.

B. Education Efforts

A portion of the funds will supplement the office's Energy Saving Partners Program, which will retrofit houses with low-cost and cost-effective energy measures, and provide energy education to low-income households.

The office also will work with developers of low-income housing to install energy-saving devices, such as light bulbs and shower heads. The office also will provide consumer education.

C. Diagnostics:

Comprehensive energy audit

Attic, wall and crawlspace insulation

Air leakage reduction
Forced air furnace efficiency assessment

Appliance safety inspection

High efficiency lighting survey

Inspection for other potential safety problems

D. Implementation

Eligible housing types include single-family houses, mobile homes and multifamily units - both renters and homeowners. Individuals who receive benefits from a number of low-income assistance programs, such as LIHEAP, SSI, TANF and COAP automatically qualify to receive Energy $aving Partners services.

E. Cost/Funding

$19 million over four years to help low-income families reduce their heating consumption through energy-efficiency measures.

101113

Connecticut Department of Public Utility Control

Target Consumer Group	Residential
Utility	Electric and Gas
Education	x
Diagnostic	x
Implementation	x
Cost	$70 million for Conservation and Load Management and Renewable Energy Fund
Funding	Collected through a non-bypassable wires charge

Appliance Standards

- In May 2004, Connecticut passed legislation establishing minimum energy efficiency standards for eight products.

Public Benefits Fund

- In April 1998, Connecticut passed legislation that established the Conservation and Load Management and Renewable Energy Fund to ensure the advancement of energy-efficient technologies and the development of Connecticut's sustainable energy future. In 2003, the fund had a $109 million annual budget. Due to budget shortfalls, the fund currently operates on a $70 million annual budget. Funds are collected through a non-bypassable wires charge.

Energy Efficiency Tax Incentives

- In October 2005, Connecticut passed legislation increasing benefits under the Connecticut Energy Assistance Program (CEAP), which helps low income households pay their heating bills; establishes a new program to provide furnace tune-ups and other energy-efficiency services; and exempts energy efficiency products and energy-efficient heating equipment from the sales tax from November 25, 2005 to April 1, 2006. The bill provisions become effective on December 1, 2005.

Carbon Cap & Trade

- Connecticut is developing a climate change action plan that is designed to help meet the New England Governors/Eastern Canadian Provinces goal for CO2 reduction (stabilization of greenhouse gas emissions at 1990 levels by 2010, and a 10 percent reduction from 1990 levels by 2020) through a wide variety of projects, such as reducing fuel emissions, further appliance efficiency standards and the development of a clean energy market.
- Connecticut is part of the Regional Greenhouse Gas Initiative (RGGI), along with eight other northeastern states. RGGI is a cap & trade program designed to reduce greenhouse gases and slow climate change.

- Modifications are being made to the current NOx Budget Trading Program rules to provide incentives in the form of allowances for renewable energy and energy efficiency programs.

Building Codes

- A law passed in May, 2006 mandates installation of energy-efficient lights at state agencies.
- Residential Code: 2003 IECC, mandatory statewide.
- Commercial Code: ASHRAE 90.1-2001, mandatory statewide.

#101098

Exhibit E4

Executive Summary - State of Delaware
Delaware Weatherization Assistance Program (WAP)

I. Introduction and Brief Summary of Programs

The Delaware Weatherization Assistance Program (WAP) installs energy efficiency improvements in the homes of low-income persons and households to reduce their energy burden, lower their energy costs and improve their health and safety in the home.

II. Target Consumer Group

Weatherization (WAP) assistance is provided at no cost to families whose incomes are at or below 200 percent of the federal poverty level.

III. Education

The program is advertised through mailers, both from the state and with information contained in consumer's utility bills.

IV. Diagnostics

The Division of State Services (DSSC) administers the program under contracts with Neighborhood House, Inc., which operates weatherization projects in New Castle County, and First State Community Action Agency, which operate projects in Kent and Sussex Counties.

V. Implementation

Each agency subcontracts with private construction and heating contractors to install such measures as: air sealing, insulation, window and door replacement, and furnace repair and replacement. The WAP operates year round with a waiting list.

VI. Cost

Not available.

VII. Funding

Funding for the WAP program is provided by the U.S. Department of Energy, Low-Income Home Energy Assistance Program (LIHEAP), and Utility Funds accumulated from rate-payers and stockholders.

#101081

Florida
Brief Summary of Program

Florida is a unique state in the Southeastern United States in the sense that it has a law, the Florida Energy Efficiency and Conservation Act (FEECA), which requires the Florida Public Service Commission to adopt rules that require electric utilities to implement cost-effective conservation and demand-side management (DSM) programs. Since 1980, utility-sponsored DSM programs have reduced winter peak demand by 5,563 MW and energy consumption by an estimated 5,488 GWh since 1980. This winter demand reduction has deferred the need for eleven typical 500 MW power plants, or enough capacity to serve approximately 1.6 million households.[*]

The Florida Public Service Commission determines an energy cost recovery factor to be applied to the energy portion of a customer's bill during the next calendar year. In 2006, the Residential Conservation Cost Recovery Factor ranged between .046 and .169 cents per kWh which equals to a utility charge of $1.42 to $1.69 per 1,000 kWh on a typical residential monthly bill. These rates cover ALL the DSM programs offered by a utility.

The low-incomes programs of the Florida regulated utilities include:

- **Florida Power and Light – Residential Low Income Weatherization Program**
  Combines energy audits and incentives to encourage low income housing administrators to retrofit homes with energy efficiency measures. Incentives include HVAC maintenance and reduced air infiltration measures.
- **Progress Energy Florida – Low-Income Weatherization Assistance**
  Designed to improve the energy-efficiency of low-income homes. Incentives are available for attic insulation upgrade, duct test and repair, high efficiency electric heat pumps, air infiltration reductions, water heater wrap/replacement, high efficiency alternative water heating, and heating and air conditioning maintenance.
- **Gulf Power Company – Low-Income Energy Education Program**
  Designed to assist low-income customers in managing energy costs by providing basic energy education and information on available utility-sponsored conservation programs and low- or no-cost energy conservation measures.
- **JEA – Low-Income Residential Audit**
  Provides similar services as traditional energy audits and works with local housing agencies to fund energy-saving practices, measures, and education.
- **Orlando Utilities Commission – Low-Income Home Energy Fix-Up Program**
  Offers 85 percent of the cost of specified home weatherization measures recommended in an energy audit to residential customers with total annual income less than $25,000.

The FEECA does not cover regulated natural gas companies. Very little, if any, natural gas energy efficiency programs exist besides general informational tips and educational programs.

#101480

[*] 2006 Annual Report on Activities Pursuant to the Florida Energy Efficiency and Conservation Act, Florida Public Service Commission, http://www.floridapsc.com/publications/pdf/electricgas/FEECA2006.pdf

Executive Summary - State of Indiana
"Low-Income Weatherization and Refrigerator Replacement"
http://www.aceee.org/utility/1bweatherrefri.pdf

I. Brief Program Summary

The program provides comprehensive services and energy savings to low-income individuals through a partnership among partnering state, local, and private entities. This leverages funding and program resources. Cinergy/PSI established partnerships with the State of Indiana Weatherization Program, the local community action agencies, the Indiana Community action Association, and the Whirlpool Corporation.

An exemplary feature of this program is a sliding-scale payment system for refrigerators. This was win-win situation for all parties because shared costs allow for a greater number of clients to be served as well as larger savings to be realized. In the refrigerator program, 57 percent of the homes tested received replacements. Replacement units must save at least 400 KWh per year. Average savings per unit is 1,260 kWh per year. The payment is split between the state and the utility based on the savings. For the 400 KWh minimum savings, Cinergy/PSI will pay $100 towards the cost of the unit, up to the total cost of the unit based on savings. The sliding scale of utility payments was based on utility avoided costs to get positive results for the utility while minimizing the state contribution required.

Another exemplary feature of this program is the partnership that Cinergy/PSI developed with Whirlpool Corporation to supply the ENERGY STAR units. This was possible due to the high volume of refrigerators being purchased. As a result, Cinergy/PSI was able to and set-up of the new units, and removal of the old one followed by permanent removal from the grid by dismantling them in an environmentally friendly manner.

A. Target Consumer Group

The program serves households whose annual income is at or below 125% of the federal poverty guideline. Clients receive services through weatherization, energy assistance, and energy education, thus ensuring that they lower their energy burden.

B. Education Efforts - N/A

C. Diagnostics

The testing results are collected by the agencies and submitted to the Indiana Community Action Association. This dats is presently entered into a database maiontained by Cinergy/PSI. However, the cost-effectiveness of replacing refrigerators has already been determined through several projects completed under the U.S. Department of Energy and utility companies. Cinergy/PSI has collected all the data, but a formal impact evaluation has not yet been conducted by PSI.

Some of the key lessons learned from the Indiana Low-Income Weatherization and Refrigerator Replacement Program include:

- Utility funding on sliding scale increases cost-effectiveness
- Delivery and coordination with supplier critical
- Testing needs to be two hours minimum

D. Implementation

This program has shown itself to be very cost-effective, so much that the state of Indiana has implemented the program statewide, effective July, 2002. This will ensure the future of this very unique partnership, as well as serve additional customers and provide additional energy savings.

Refrigerator replacements are a common program feature since most of the homes served are very low income, and these households tend to have the older, less efficient refrigerators. To date, the program in the Cinergy/PSI territory is replacing an average of 57 percent of the units tested. Not only is this program providing clients with savings, but is permanently removing the old units from the grid and ensuring other families will not be burdened with them.

E-F. Cost/ Funding

Funding Sources: Cinergy/PSI and the State of Indiana Weatherization

The payment is split between the state and the utility based on the savings. For the 400 KWh minimum savings, Cinergy/PSI will pay $100 towards the cost of the unit, up to the total cost of the unit based on savings. The sliding scale of utility payments was based on utility avoided costs to get positive results for the utility while minimizing the state contribution required.

Utility Costs - PSI:

11/01 - 10/02	$63,649*
2003 (proj.)	100,000

State of Indiana Costs:

11/01 - 10/02	$51,349*
2003 (proj.)	80,000

* *(These numbers reflect only the cost of the new refrigerator (which includes delivery of new, and removal and disposal of the old). No PSI or state program administration expenses are included. PSI's administration expenses totaling $15,351)*

101112

Iowa Weatherization Challenge

The Iowa Utilities Board (IUB) is striving to reduce the state's energy use, in part, by helping Iowans prepare for projected high winter heating bills and lessen their impact. For the second consecutive year, The IUB plans to work with local community organizations across Iowa to recruit volunteers and solicit donations to help weatherize homes for Iowa's low-income families, elderly, disabled individuals, and others needing assistance in their community. For more information please see (http://www.state.ia.us/government/com/util/IWC.html)

The IUB will provide matching grants of up to $500 to assist qualified community groups from across Iowa in their efforts to help Iowa meet its objectives. At least $10,000 will be available for these grants this year. The grants will be for weatherization projects to be completed by November 30, 2006.

The IUB will assist community groups with their events by helping to secure training in weatherization methods for volunteers, receive donated or favorably priced supplies, locate appropriate weatherization sites, and issue news releases and communicate with the media.

The Iowa Weatherization Challenge information kit includes the following documents needed to conduct an Iowa Weatherization Challenge effort:

- Grant Application
- Information for Volunteer Organizations
- Air Sealing Guidelines for Volunteers
- Volunteer Checklist / Waiver Release Form
- More Low-Cost/No-Cost Tips for Energy Saving
- Report Card
- Complete Media Kit (.zip file).
  Media kit includes:
  - Suggestions for working with the media
  - Sample press release 1
  - Sample press release 2
  - Sample press release 3
- Complete How-to Kit (.zip file)
- Complete How-to Kit (.pdf file)

Videos clips demonstrating weatherization techniques are available for downloading. Each of these video clips was provided by Alliant Energy as part of its PowerHouse series.

Video Clip (right click on title and select Save Target As / Save As)	File size	Estimated Download Time (at 56 Kbps)
Finding Air Leaks	71 MB	21 minutes
Weatherizing Windows and Doors	50 MB	15 minutes
Heating Tips/Safety Tips	54 MB	16 minutes
Information about Natural Gas Prices		

Target Consumer Group	Low-income families, elderly, disabled and others
Utility	Reduce gas and electric heating bills
Education	X
Diagnostic	X
Implementation	X
Cost	Grants of up to $500 for qualified community groups. At least $10,000 total will be available
Funding	Iowa Utilities Board

Building Codes

Residential Code: The state energy code minimum is based on 1992 Model Energy Code, which is mandatory statewide. Commercial Code: ASHRAE/IESNA 90.1-1989, mandatory statewide. Click here for more information.
http://www.state.ia.us/dnr/energy/MAIN/PROGRAMS/residential/energycodes.html

#101096

Kansas
Summary of Program

The State of Kansas currently has no programs directed at low-income households and has no natural gas energy efficiency programs. However, Governor Kathleen Sebelius' staff is currently formulating a low-income energy revolving loan program that is based on Nebraska's effective and popular "Energy and Dollar Saving Loan" Program (Energy Loan Program).

Nebraska's Energy Loan Program is a fuel-neutral, revolving loan program that offers energy saving loans to public and private entities statewide. The state energy office works with state lending institutions to provide low-interest loans for energy efficiency improvements. In general, the state provides monies for one-half of the total project amount and the other half is financed by lending institutions via a low-interest loan which is typically 5% or less. Energy improvements must meet efficiency standards identified by the state, which include but are not limited to high efficiency heating equipment, insulation, and high efficiency water heaters.

Implementation
Applicants must complete an Energy and Dollar Saving Loan application outlining the proposed energy improvements and bring it to a participating Nebraska lender. The applicant must also fill out the lender's loan application. After the lender approves the loan, the lender submits the application and proposed energy efficiency home improvement to the state energy office for review. After the state energy office approves the project and reserves funds for the loan, the lender will notify the applicant to proceed with the proposed improvements. The total amount that can be borrowed is limited and ranges from $35,000 to $175,000.

Funding
The state portion of the program is funded from court settlements which found price violations by oil companies between 1973 and 1981.

It is anticipated that Kansas' program will be similar to the Nebraska Energy Loan Program with one major difference: the Kansas program may be limited to low-income households that do not qualify for low-income weatherization assistance, but cannot afford to make energy efficiency improvements without assistance (e.g. 150% poverty level).

For more information about Nebraska's Dollar and Energy Saving Loans, please visit: http://www.neo.ne.gov/loan/index.html .

Efficiency Maine

Target consumer group	Residences and businesses
Utility	Electricity
Education	X
Diagnostics	x
Implementation	X
Cost	Various programs
Funding	Maine Pubic Utilities Commission

Target Group

Efficiency Maine is a statewide effort to promote the more efficient use of electricity, help Maine residents and businesses reduce energy costs, and improve Maine's environment. Efficiency Maine is funded by electricity consumers and administered by the Maine Public Utilities Commission (Commission).

The Commission created Efficiency Maine to fulfill the Energy Conservation Act, which directs the Commission to develop and, to the extent of available funds, implement energy conservation programs.

Efficiency Maine includes the following programs:

Business

The Efficiency Maine Business Program works with businesses just like yours to save energy and save money. The program offers information and cash incentives to all Maine businesses that install qualified energy efficient electric products. Act now to take advantage of these incentives.

ENERGY STAR Residential Lighting

Efficiency Maine's Residential Lighting Program enlists the participation of and works closely with manufacturers and lighting retailers to encourage them to produce and sell energy efficient lighting products to the residents of Maine.

Building Operator Certification

Efficiency Maine, in cooperation with Northeast Energy Efficiency Partnerships (NEEP), offers a Building Operator Certification (BOC) training series in various regions of the State. The training series prepares building operations and maintenance staff for certification in energy and resource management for efficient building systems. Individuals who successfully complete the training series are eligible for Building Operator Certification.

Trainings and Upcoming Events

Lists upcoming training events such as building operator certification.

Maine Energy Education

There are two energy education programs operating in the State of Maine. One program, the Maine Energy Education Program (MEEP) provides education on energy issues to fourth

through twelfth grade students in central and southern Maine, while a second program, operated by Maine Public Service (MPS) Company offers educational programs in northern Maine. Both programs strive to increase consumer knowledge of energy efficiency - a fundamental market barrier to economically rational behavior. The programs provide school children with the information on electricity production, its use and conservation at home and at school, the effects of energy use on the environment, and the effects of energy use on the economy. Lessons learned in school by the students spill over into the home environment improving energy awareness and energy use habits at home.

Maine High Performance Schools
Efficiency Maine is working with MDOE, BGS, the Maine School Management Association (MSMA), the US DOE, and participating school districts to encourage energy efficient designs and the installation of energy-efficient equipment in new schools.

The program includes design and implementation assistance to participating schools. The program will also include an education component and an outreach and marketing effort led by MSMA, which will consist of workshops and seminars promoting energy efficiency in schools.

Low Income
Efficiency Maine's Low Income Appliance Replacement Program was designed to replace old and inefficient refrigerators in the homes of low-income consumers. Efficiency Maine was able to complement the services being offered by MSHA and the CAPs through a memorandum of understanding (MOU) with the Maine State Housing Authority.

State Buildings
The Maine Public Utilities Commission (MPUC), under its Efficiency Maine initiative, and the Maine Department of Administrative and Financial Services (DAFS) developed a Memorandum Of Understanding (MOU) to improve the energy efficiency of State buildings.

Program Description
Under the MOU, DAFS identifies new construction or major renovation projects and Efficiency Maine reviews the projects for cost effectiveness. Projects selected are developed and managed by DAFS. Efficiency Maine approves and funds each project's premium efficiency measures.

The MOU requires the execution of an energy survey of all state buildings to identify opportunities for electrical energy efficiency. The value of the savings and the means of capturing them will be described in a legislative report.

The Efficiency Maine website is found at: http://www.efficiencymaine.com/ The website includes links to information on the following:

- Maine Public Utilities Commission
- Energy Efficiency Programs
- Energy Savings Tips
- Press Releases
- Business Opportunities
- What's New

Public Benefits Fund
In 2002, the Maine legislature passed electric utility restructuring legislation that includes a system benefits fund to pay for a refrigerator replacement program and an energy-efficient lighting program for low-income residences. Click here for more information.
http://www.liheap.ncat.org/dereg/states/maine.htm

*The Maine Public Utilities Commission's (PUC) Energy Program Division offers no cost business energy efficiency audits, as well as a low interest (currently 3%) Commercial Energy Efficiency loan, up to $35,000, for completing the recommended energy efficiency improvements.

The PUC also offers incentives for electric efficiency measures offered through the Efficiency Maine program. Information on the programs can be found at the PUC website:
http://www.maine.gov/mpuc/.

Carbon Cap & Trade
Maine is part of the Regional Greenhouse Gas Initiative (RGGI), along with eight other northeastern states. RGGI is also a cap & trade program, designed to reduce greenhouse gases and slow climate change.
http://www.rggi.org/

Building Codes
Residential: A state-developed code, which is less stringent than the 1992 Model Energy Code, is mandatory statewide. Commercial: ASHRAE/IESNA 90.1-2001 is mandatory statewide. C
http://www.energycodes.gov/implement/state_codes/state_status.php?state_AB=ME

According to legislation passed in June 2005, the Public Utilities Commission must propose energy efficiency standards for residential rental properties that are occupied year-round. The properties not currently meeting standards must be brought up to code by January 1, 2010 or within 90 days of sale, whichever comes first.
http://janus.state.me.us/legis/LawMakerWeb/summary.asp?ID=280016067

Other Legislation
Maine passed legislation in May 2005 that will require gas utilities that serve at least 5,000 residential consumers to implement cost-effective conservation programs promoting sustainable economic development and reducing greenhouse gas emissions and other air pollutants. At least 40 percent of the program funds must go to low-income and small business customer programs, with the remaining funds going to conservation programs for all customers
http://janus.state.me.us/legis/LawMakerWeb/summary.asp?ID=280015050%20

Legislation passed in March 2006 allows school facilities to enter into energy performance-based contracts with maximum payback periods of 15 years and total costs up to $2 million.
http://janus.state.me.us/legis/LawMakerWeb/summary.asp?ID=28002003

101097

Exhibit E10

Executive Summary - State of Maryland

Various Programs

I. Introduction and Brief Summary of Programs

Maryland offers a diverse series of programs to assist low-income residents with weatherization and financial assistance in regards to utility bills. The following programs are state programs and administered by the Office of Home Energy Programs, a wing of Maryland's Department of Human Services.

- The **Weatherization Assistance Program** ("W.A.P.") provides home weatherization services that range from providing weather stripping to caulking of windows in an effort make homes more fuel efficient.

- The **Utility Service Protection Program** ("U.S.S.P.") assists low-income residents from utility shut-offs.

- The **Maryland Energy Assistance Program** ("M.E.A.P.") provides assistance with home heating bills in which payments are made to a utility company of behalf of eligible residents. In limited circumstances dependent upon funding, eligible residents can apply under MEAP to have furnaces and refrigerators repaired or replaced by energy efficient models.

- Maryland's **Electric Universal Service Program** ("E.U.S.P.") also provides financial assistance for electrical bills, both current bills and those past due.

II. Target Consumer Group

Maryland's Office of Home Energy Programs specifically targets low income residents with eligibility requirements and factors determined based on income, whether an applicant receives certain disability or public assistance benefits and whether an applicant is elderly or disabled. There appears to be some discretion in determining eligibility as public information provides that an applicant "may" be eligible if such requirements are met.

III. Education

Under the umbrella of Maryland's Department of Human Services, the Office of Home Energy Programs has outreach programs conducted from local offices spread through out the state. General information describing the various programs and qualifications are generally mailed to classes of clients of the Department of Human Services and available to the public via the internet.

IV. Diagnostics

The thrust of Maryland's programs center of utility payments on behalf of low-income residents that met eligibility requirements. There are few facts and figures available describing the weatherization program at this time.

V. Implementation

Applicants must seek approval from local offices. Eligibility requirements must be documented prior to approval of their applications. Once approved for MEAP, EUSP and/or USSP, payments are made on behalf of certified low-income residents directly to utility companies. There are no specific details relating to the WAP process or relating to the costs and requirements for contractors intended to carry out weatherization work on the homes of eligible applicants.

VI. Cost

In the FY 2006 (ending July 1), Maryland's Department of Human Services expended $34,378,301 to pay current and arrearages for electric bills of 83,853 households under the EUSP program. A further $26,965,538 was applied to 75,185 households under the MEAP program for heating utility bills. No figures are currently available for the WAP and USSP programs.

VII. Funding

Funding for these programs is provided in part by a surcharge on rate-payers billed. The surcharge was mandated by Maryland's legislature. In addition, grants from the U.S. Department of Energy and from the state budget further supplement the funding.

Exhibit E11

Executive Summary - Massachusetts
"Low-Income Gas Program" - NSTAR Gas Company

I. Brief Program Summary

The Residential Low-Income Program offers weatherization measures to NSTAR's neediest customers. The objective of the program is to increase energy efficiency and reduce the energy cost burden for low-income customers through energy efficiency education and the installation of gas energy efficiency measures.

The weatherization services available include an energy audit, attic insulation, wall insulation, air sealing, heating system repair/replacement (on a qualifying basis), and safety inspections. The program allows each eligible customer to receive up to $4,500 for these measures. When possible, the program is leveraged with Department of Energy (DOE) weatherization funds.

The program is administered by NSTAR in conjunction with the South Middlesex Opportunity Council (SMOC), which is the lead vendor. NSTAR works closely with SMOC on all aspects of program design and implementation. Community Action Program (CAP) agencies are responsible for providing the actual weatherization services to the customer. The CAP agencies with installation contractors to ensure that [proper program guidelines are enforced. They are also responsible for ensuring that the customer meets the eligibility requirements for program participation. The CAP agencies provide SMOC with the required documentation of all work performed.

A. Target Consumer Group

Low-income gas customers in single- and multi-family housing. The program directly targets residential low-income customers with annual incomes at 60% of the Massachusetts median income level. NSTAR Gas works with the CAP agencies to market the program to qualifying customers in its service area. Priority is given to high use (high-energy burden) customers.

B. Education Efforts

Various methods of marketing are used to promote this program. NSTAR markets the program via bill inserts and messages, marketing brochures, and literature, company newsletters, and the Company web site. Marketing efforts are also conducted by the CAP agencies. While telemarketing proves the most effective, direct mail and community events are also used.

C. Diagnostics

The company has realized great savings through the low-income programs. Since May, 2001 this program has saved over 96,500 therms, which is equivalent to heating over 98 homes in Massachusetts for one year. Further, the program produces other non-energy benefits for customers who participate. Struggling low-income customers who pay their own bills not only save energy through NSTAR's program, but also save money that can be put toward other

essential household expenses. In addition, their weatherized homes provide greater levels of comfort, health, and safety as a result of the measures implemented through the program.

Annual energy savings achieved (therms):

1997	34,150
1998	81,660
1999	37,740
2000	90,710
2001	58,527
2002	37,977

D. Implementation

770 customers between May 1, 2001 and April 30, 2003; total since inception (1996): 1,876
Approximate eligible population: 18,000
Participation rate: About 19% of eligible customers have been served by the program since its inception.

E. Cost

Year	Budget/Actual Program Costs
2001	$739,000/$800,072
2002	$813,000/$740,166
2003(prelim)	$1,000,000/ NA
2004(proj)	$1,000,000/NA

F. Funding

NSTAR Gas recovers its energy efficiency costs, along with any applicable incentives and lost margins, through the conservation charge (CC) cost recovery mechanism reviewed and approved by DTE.

Appliance Management Program

I. Brief Program Summary

In 1995 National Grid formed a partnership with the local low-income weatherization and fuel assistance network of Community Action Program (CAP) agencies to develop a low-income electric conservation program. The Appliance management Program (AMP) is very successful in delivering electric savings to low income customers by a combination of home appliance surveys, education about energy used by household appliances, and the installation of energy-savings measures. The program is delivered to National Grid customers by local CAP agencies in its service territories in Massachusetts (Massachusetts and Nantucket Electric), in Rhode Island (Narragansett Electric), and New Hampshire (Granite Sate Electric). In Rhode Island AMP is offered in cooperation with the Rhode Island State Energy Office.

A. Target Consumer Group :

The Appliance Management Program (AMP) income eligibility level for customers is 60% of median in Massachusetts and is indexed to the same income criterial as for fuel assistance in Rhode Island. AMP is available to customers living in 1 to 4 family facilities.

The appliance audit service component of AMP is targeted to income eligible customers who use at least 10 kWh, base load, per day and have a minimum of nine months billing history at that residence. Base load use is determined by kWh usage per day in the most recent May or September billing period.

B. Education Efforts

The program uses a cooperative co-learning approach of adult to adult education, innovatively designed for limited income households. The purpose of the in-home visit is to identify mutually beneficial outcomes rather than merely instructing or doing things for customers. One method for identifying the sources of high use is to question customers and listen actively about how they use appliances. This knowledge is used to prioritize savings opportunities and create a workable action plan allowing the customer to use their appliances more efficiently. This program has been able to actually quantify energy savings due to education and consumer action, which has rarely been documented. The local CAP personnel have strong expertise in working with low income customers and are able to tie customers into other energy efficiency and community action programs such as job training, telephone discount rates, and educational programs.

C. Diagnostics

AMP has been extensively evaluated, which has both documented impacts and provided critical feedback for program improvement. Complete impact evaluations were done for the program in 1998, 1999, and 2001. Another impact evaluation is currently under way by National Grid's vendor Quantec LLC and results will be available later in 2005. The evaluations reveal that AMP is highly cost effective. For example, the benefit to cost ratio (based on the total resource

cost test) of AMP is 2.56 as reported in the Massachusetts Electric 2003 Annual Report, based on most recent evaluation results.

AMP applies the "best practice" of training, testing and measuring and reporting results to create feedback loops that foster quality and continual learning. The appliance audit software and the recent shift to the use of blower door guided infrared scanners by each local agency are two examples of this.

D. Implementation

Program start date: 1996

Participants: From 1996-2004 a total of 30,923 households have participated. AMP served 4,622 households in 2004--and has served 4000 or more households per year since 2000.

Annual energy savings achieved: In 2004 AMP yielded 5,227 MWH as a result of new measures installed; the cumulative annual energy savings achieved by the program from 1996-2004 is 32,766 MWH. Lifetime savings are estimated to be 425,000 MWH.

E. Cost:

Cost effectiveness: Benefit to cost ration of 2.56 (total resource cost test).

Budget and cost information: About $5.6 million per year, broken out as about $4.5 million in Massachusetts, $1 million in Rhode Island and less than $100,000 in New Hampshire.

F. Funding:

State system benefits charges in all three states.

101111

Exhibit E12

Minnesota
Non-Profit Affordable Housing Project

I. Introduction and Brief Summary of Program

The Non-Profit Affordable Housing Project consists of a partnership between CenterPoint Energy, Habitat for Humanity, Project Pride in Living, and the Greater Metropolitan Housing Corporation. The collaborative project addresses energy efficiency and conservation by providing financial incentives and education.

II. Target Consumer Group

The program is specifically tailored toward new low-income home owners within Center Energy's service area. Approximately 130 new low-income homes are constructed within that area annually.

III. Education

Providing education on energy efficiency is a specific objective of the program. Those aided receive a "home owner's manual" complete with energy saving tips. The program itself is advertised via the non-profits that participate such as Habitat for Humanity.

IV. Diagnostics

Rebates for efficient furnaces, water-heaters, ventilation and shade trees are available to eligible households. Up to $1,330 in rebates could be awarded to households that complete the full requirements of the program.

V. Implementation

Over 130 newly constructed homes participated in the first two years of the program. CenterEnergy estimates that homes taking advantage of the program save 37% on their heating bills.

VI. Cost

Projected costs for 2006 are $289,340.

VII. Funding

As required by law, CenterEnergy is required to spend .05% of its gross operating revenue on conservation efforts, thus financed by rate payers.

#101083

State of Missouri

Brief Summary of Program

The State of Missouri has no programs that are directed at low-income households outside of the U.S. DOE sponsored Weatherization Assistance Program. However, Laclede Natural Gas Company offers some natural gas energy efficiency programs.

EnergySmart

The EnergySmart program offers workshops on energy conservation to small groups of low-income customers through government agencies, civic organizations and churches. Laclede Gas provides the workshops and supplies informational materials and answer questions. The workshops are free of charge and the program is funded through utility rates.

Insulation Financing Program

Through this program, Laclede Gas will lend a customer up to $2,000 at 3% yearly interest if they are using part or all of the money to insulate their home. Any remaining borrowed funds can be used for other energy-saving modifications like adding storm windows or storm doors. The program is also funded through utility rates.

Laclede EnergyWise Dealer Program

Laclede Gas will help consumers purchase a high-efficiency natural gas furnace and other energy-efficient and environmentally friendly gas appliances as well as high-efficiency air conditioners at competitive interest rates.

This program is open to credit-qualified residential and commercial customers. Laclede will finance up to $10,000 per heating system, including some additional appliances, that one can pay back on a monthly gas bill. A down payment of 5% is required and the program has a lifetime limit of four heating systems per customer.

The EnergyWise program has been expanded to include additional funds for providing assistance to low-income residential rental property owners. If a landlord owns residential rental property of eight units or less and has a household income that is no more than two times the federal income poverty guidelines, then the landlord may qualify for an interest-free EnergyWise loan and benefit from no loan inspection costs and reimbursement of the down payment.

New Hampshire

NHSAVES@HOME – Home Energy Assistance Program

Implementation: The low-income retrofit program began in July 2002. The program is designed to help income-qualified customers manage their energy use and reduce their energy bills. The program is collaboratively implemented with governmental and community organizations. Community Action Agencies (CAA's) are charged with determining program eligibility through income levels and number of household members criteria. The same services are offered to all qualified candidates throughout the state, regardless of utility. Administration of the program is coordinated by the state's four electric utilities and delivered to customers by NH's six CAA's. The program is marketed in three languages.

Funding: The program leverages funding from several sources, including DOE's Weatherization Assistance Program, Heating Replacement and Repair Program, HUD's Home Program via the NH Housing Authority, NH Department of Environmental Services Oil Tank Replacement Program, *local gas company* retrofit programs, and the State of NH block development grants.

The program includes customer intake, scheduling and performance of the energy audit, the performance of quality assurance (see Diagnostics section below), and close-out activities. The program offers improvements such as insulation, air sealing, thermostat replacement, electric hot water conservation measures, appliance and lighting upgrades, and appropriate health and safety measures.

Diagnostics: Quality assurance (QA) on the program is enabled through performance of energy audits on 10% of the participant's homes following installation and service. The program uses a holistic approach to home weatherization using state-of –the-art software and data tracking to provide each customer with the "best practices" for their home. The software involves two components: Targeted Residential Analysis Tool (TREAT) and Online Tracking Tool for Energy Retrofits (OTTER). The OTTER program provides the repository for all utility, customer, contractor, work order tracking, and QA data that are common to all users. Data from the OTTER program is used to provide energy and cost savings data from the various measures taken.

The program achieves relatively high energy and cost savings by targeting electrically heated and high kW-hr usage homes

Education: The program also has an education component specifically tailored for income-eligible customers to help them better understand their home and the factors that affect energy use.

The Program also organized a "best practices" organization to educate energy auditors and contractors involved in the delivery of energy efficiency measures.

Target Consumer Group: The Program is open to both single- and multi-family households that meet the income eligibility requirements, *regardless of heating fuel type*.

Costs: The program was originally capped at $3,600 per customer. That was increased to $4,000 in 2004. While average homes receive about $2,000, some receive more.

#101101

New Jersey Comfort Partners

Implementation: This Program is designed to improve energy affordability for income-eligible households. This objective is accomplished through the direct installation of energy efficiency measures, personalized customer energy education and counseling. Participants are asked to partner with the program to develop and carry out a household energy savings Action Plan.

The NJ Comfort Partners program has a goal to serve 3,250 Comfort Partners customers and 200 seniors pilot customers through June 30, 2004 (6,500 for all of 2004), deliver the program to high-use, income-eligible customers, and achieve 60 percent of the goals of 10 percent electric savings and 15 percent gas savings.

To date, there has been little coordination between the Comfort Partners Program and the Weatherization Assistant Program (WAP) and the LIHEAP program. Three different governmental agencies are involved, which present coordination challenges. The programs also focus on different measures. The WAP is more likely to provide furnace work and window and door replacement. The Comfort Partners Program is more likely to provide attic insulation. [1]

Program participants receive:

- Direct installation of cost-effective energy efficiency measures in the home (determined on a home-specific basis) which can include: efficient lighting products; hot water conservation measures (water heater insulation, water heater pipe insulation and energy-saving showerheads and aerators); replacement of inefficient refrigerators; thermostats; insulation upgrades (attic, wall, etc.); blower-door guided air sealing; duct sealing and repair; heating/cooling equipment maintenance and other dwelling-specific measures
- Comprehensive, personalized energy education and counseling; and account balance reduction for qualified participants who agree to payment plans

Target Consumer Group: The Comfort Partners Program is available to any New Jersey household with significant electric use, having an income at or below 175% of the federal poverty guidelines. Households that receive USF, Lifeline and/or Pharmaceutical Assistance to the Aged and Disabled (PAAD) are also eligible.

Funding: In 1999, electric and gas restructuring legislation authorized the NJ Board of Public Utilities (BPU) to establish an adjustable systems benefits charge (SBC) for socially beneficial programs. In March 2001 the BPU approved a comprehensive 3-year statewide energy efficiency and renewable energy program that included a low-income energy efficiency component that was named the NH Comfort Partners program

Prior to the implementation of the Comfort Partners Program, low-income usage reduction programs were developed by each utility as part of their demand side management (DSM) plans. The existing programs differed widely in terms of funding levels and types of services offered. Comfort Partners replaced those individual utility programs with a single statewide program model that could offer comprehensive services to an eligible household. However, while the

[1] "NJ WAP and NJ Comfort Partners Comparison of Programs and Evaluation Findings: Final Report", Applied Public Policy Research Institute for Study and Evaluation, June 2004

program was consistent across utilities, each utility retained responsibility for meeting goals in terms of number of households served and for managing program expenditures.

Costs: The NJ Comfort Partners Program is budgeted at $15 million annually, and is managed by seven major electric and gas utilities. The budget level increased to $19.8 million in 2004.

Diagnostics: The NJ Comfort Partners program has two information tracking systems. The implementation contractor, Honeywell/DMC (HDMC) has a database that contains extensive information on the customers' characteristics, home characteristics, and measures installed for jobs they complete. JCP&L's WARM3 database contain extensive information on customer characteristics, home characteristics, measures installed, invoicing for all measures, and dates for installation, inspections, approval for JCP&L customers, electronic message board, and numerous administrative and operational reports. The customer level data tracking systems that have been developed by the Comfort Partners are critical for program evaluation, and are useful for program management. These tools should be used, either as a building block, or as a template, to design a tracking system for the program model.

The Comfort Partners program is required to submit a monthly report on the number of Homes completed by utility and the arrearage reduction participants by utility. They are Required to submit a monthly report on the Seniors Pilot with the number of ineligible applications, customers not interested, home surveys completed, jobs in progress, and jobs completed. They are required to submit a quarterly report on energy savings and demand savings by customer, by measure, and by company and a quarterly report on water savings by customer, by measure, and by company. They are required to submit a quarterly quality assurance report with the number of inspections by utility and inspection company; the type of inspection: gas heat/ joint delivery, electric heat, oil heat; the number of passed inspections, the number passed with customer or inspector reservations; the percent of jobs passed, and the category of job failure if the job failed.

#101100

Exhibit E16

New York
"EmPower New York"

I. Brief Program Summary

Since 1999, the New York State research and Development Authority (NSERDA) has successfully increased energy affordability for over 13,000 low-income households (through 2003)[1] by providing energy efficiency measures that achieve significant energy and peak demand savings. These services are provided through a network of weatherization agencies and private contractors, all of whom are certified by the Building Performance Institute (BPI). Average annual cost savings exceed $150 per household over the entire program.

A. Target Consumer Group

Program eligibility is extended to households below 60% of the state median income that are either: enrolled in the utility payment assistance program, seniors with high energy bills referred by a local Office for the Aging, previously served by weatherization and currently ineligible of electricity reduction measures, or on a weatherization waiting list for periods exceeding six months. Approximately 60% of those referred for services are provided with energy efficiency measures.

B. Education Efforts

A customer education component provides consistent energy awareness and education messages. Educational materials are provided through mail and through in-home education sessions provided by the BPI (Building Performance Institute) contractor network. The energy education is reinforced during statewide energy and money management workshops conducted by Cornell Cooperative Extension. These education components engage the customer to empower themselves by taking actions that will reduce their energy costs.

C. Diagnostics

To ensure that households see immediate savings, contractors can complete a number of prequalified measures during the initial visit, such as compact fluorescent lights (CFL), hardwired fixture installation, halogen torchiere replacement, set-back thermostat, and hot water tank wrapping. Many jobs can be completed quickly, with a single follow-up visit for appliance replacements or other measures. A simple energy savings calculator was developed to allow for quick determination of measure cost effectiveness. While the primary focus is on electricity use reduction, the program also addresses shell and heating system measures when the needed services are unavailable form other programs.

[1] Meeting Essential Needs: The Results of a National Search for Exemplary Utility-Funded Low-Income Energy Efficiency Programs, ACEEE, U053, September 2005

EmPower New York has worked closely with the weatherization Assistance Program (WAP), and weatherization agencies to ensure coordination of efforts and funding and to maximize benefits to low-income households.

IN July, 2004 NYSERDA included two utility-run programs under its EmPower New York umbrella. This expansion includes shell and heating system measures when they offer the best means to reduce the household energy burden and when services through WAP are not available.

D. Implementation

NYSERDA's programs are evaluated by a 24-member systems Benefits charge Advisory Group representing various interests, including utilities, business and environmental groups, energy service companies, community organizations, professional and trade associations, and national energy efficiency and energy research organizations.

E.F. Cost/Funding

The funding source is a statewide Systems benefits Charge and funds leveraged from other state and federal programs. The program is funded at about $7 million per year. At this level, NYSERDA anticipates it can serve about 6,100 customers per year.

101110

Exhibit E17

Oregon
Energy Trust of Oregon, Inc.

I. Introduction and Brief Summary of Program

The Energy Trust of Oregon, Inc. is a non-profit organization that is dedicated to investing in cost-effective energy conservation. Among it's functions, the organization administers weatherization programs and promotes alternative energy resources such as solar power. Both residential and business energy efficiency concerns are addressed.

II. Target Consumer Group

To be eligible for weatherization incentives and inspections, residents need only be consumers of Portland General Electric, Pacific Power, NW Natural or Cascade Natural Gas. The former are the utilities that fund the Energy Trust of Oregon, Inc. through state mandated surcharges contained within rates.

III. Education

Information is available through mailers in utility bills, an internet website and press releases.

IV. Diagnostics

Consumers can receive free home inspections, cash incentives for various improvements made to residential homes that increase energy efficiency. The organization provides a listing of certified contractors for various home improvements that specifically address improving energy efficiency such a insulation, duct sealing, windows, etc. In addition, cash incentives are paid for the replacement of household appliances such as washers and dryers with more efficient models.

V. Implementation

The Oregon Public Service Commission receives annual reports from the Energy Trust of Oregon, Inc. annually and oversees the performance of the organization. The Commission has set specific bench marks for the organization to realize. The benchmarks include the amount of electric megawatts and therms of natural gas saved through the organization. As an example, the organization reported in 2005 that 1.4 million therms are saved annually.

VI. Cost

In the 2005 annual report, the Energy Trust of Oregon reported expenditures of $53,957,825.

VII. Funding

The Energy Trust of Oregon, Inc. is funded by a 3% "public use funds" charge on consumers' utility bills. The rate surcharge was mandated by the state legislature.

#101072

Pennsylvania
"Low-Income Usage Reduction Program (LIURP)"

I. Brief Program Summary

Mandated by a 1987 PUC order, the Low-Income Usage Reduction Program (LIURP) was renewed in 1992 through 1996, and continued under universal service provisions of electric and gas utility restructuring legislation. The state's 15 major gas and electric utilities participate in LIURP with a pre-restructuring funding level of about 2/10 of one percent of each utility's total revenues. LIURP includes an education component that addresses energy savings, regular bill payment behavior and provides application assistance.

Implementation and remediation available vary by utility, but generally includes provision of or financing of weatherization services and equipment repair and/or replacement.

A. Target Consumer Group

The target consumer group is low-income gas and electric customers in single- and multi-family housing. The program directly targets residential low-income customers with annual incomes at 150% of the Federal Poverty level. Utilities may target up to 10% of the annual budget of the program toward customers with incomes of 200% of the Federal Poverty Level who also have arrearages with the utility.

B. Education Efforts

Various forms of education are provided for within the law. Group presentations, workshops, and in-home demonstrations are specifically mentioned, but other forms of education and marketing appear to contemplated and eligible for cost recovery.

C. Diagnostics

Gas heating customers averaged 18.0% energy savings, with Columbia Gas Company of Pennsylvania leading the gas industry at 28.0% followed closely by Equitable Gas and National fuel Gas at 25% and 24% savings. (early 1990s data)

D. Implementation

Jobs completed in 2003: 5,084

E. Cost

Natural gas utilities in Pennsylvania spent roughly $7.7 million in 2003 and 2004 on these programs.

F. Funding

Cost recovery is not directly addressed, but it is established within the context of unbundling proceedings.

#101094

Texas
"Low-Income Weatherization Standard Offer"

I. Brief Program Summary

The primary objective of this program is to achieve cost-effective reduction in energy consumption during peak summer demand. Additional objectives of the program are:

- To provide meaningful demand and/or energy savings that contribute to the achievement of utility energy efficiency goals and reduce energy cost for the end-use customer.
- To enhance program cost-effectiveness by minimizing lost opportunities for demand and energy savings in individual residences.
- To provide energy efficiency improvements to individual households at no or very low cost.
- To provide energy efficiency improvements in apartments occupied by hard-to-reach customers with contributions from building owners.

A. Target Consumer Group

The program will be available to customers living in households with incomes at or below 200% of the federal poverty guidelines consistent with the rule. The target populations are based on the following objectives:

- To serve customers with incomes too high to qualify for low-income weatherization program services to serve customers with an income level between 125.0% and 200% of the poverty guidelines, and
- To assist customers on long waiting lists for weatherization services (income level at or below 125.0% of the poverty guidelines).

B. Education Efforts

Brochures

A one-page program brochure will be developed to explain basic program information to participants. The brochure will be available to project sponsors upon request and at workshops described below. The sponsoring utility will not undertake direct mailing of brochures to consumers.

Workshops

A series of workshops will be held to explain the program process and requirements to potential project sponsors. Workshops will be advertised in public media and through direct mailings to potential project sponsors.

Customer Protection

The program shall be designed to comply with the customer protection provisions required by P.U.C. SUBST. R. 25.181 relating to the Energy Efficiency Goal.
Energy Education material must be provided to resident, and building owners or property managers.

C. Diagnostics

Program Costs

Program costs are capped by cost-effectiveness criteria at levels that correspond to 100% of avoided costs. Incentive payments shall not exceed the maximum amounts established in P.U.C. SUBST. R. 25.181 regarding proxy avoided costs and customer class, lighting and load factor incentive caps.

Utah
Refrigerator Retirement and Replacement Programs

Utility Utah Power, part of Pacific Corp

Name of Program "See ya later, refrigerator"

History Service Territory: 1.5 million customers in Utah
Implementation of the program is ongoing
This program is offered to a limited geographic area from October 15 and March 15 each year because of possible weather and/or road conditions. Program offered by Pacific Corp in 6 states where they provide service Most customer base rural, but have some urban accounts (Salt Lake City, small section of Portland, Oregon, etc). Largest customers California, Washington, Idaho and Wyoming in addition to Utah

Incentive Customers earn a $40 cash incentive from Utah Power. In addition to the $40 incentive, they'll also receive a free kit at the time of pickup. The kit contains information on energy efficiency and tools to help one use less electricity. The kit contains a free CFL, refrigerator/freezer thermometer card. Also they will properly recycle the old unit.

Marketing and Advertising "See ya later, refrigerator" devoted page on Utah web site.

How it Works – Who Does What
Focus is on old refrigerator or freezer in the garage or basement that customers would like to get rid of. Also promoting the purchase ENERGY STAR labeled models. Message is….are you planning to buy a new refrigerator or freezer in the near future? If so, please contact us to pick up your old one. This program is offered to all Utah Power residential customers in Utah. Refrigerators must be in working condition and must be plugged in to verify they are working. Units between 10 and 27 cubic feet in size (based on inside measurements) qualify for the program. To schedule a pick up, customers sign up online or call 1-866-899-5539. Customers must own the unit(s) being recycled. Limit two units per residential address. A check will be mailed to customer within 4-6 weeks after the appliance collection.

Decommissioning Utah Power contacts with JACO, an appliance recycler, to pick up and recycle refrigerators and freezers. They properly recycle the old refrigerator or freezer. About 90 percent of it will be reused.

Costs Not Supplied

Energy Saved Message to customers:
Refrigerators built prior to 1990 can use two to three times more energy than a high-efficiency one built today. The average refrigerator or freezer uses about 2,280 kilowatt-hours (kwh) annually. By discontinuing the use of a second refrigerator, you can save about $150 a year on your electricity bill. Federal manufacturing codes were upgraded in 2001 so new models only use about 500 kwh per year, or even less.

Lessons Learned – Reminded to be sure the old unit is empty when it is picked up.

Contacts Tel:800-414-5072
From: Refrigerator Retirement and Replacement Programs Lessons Learned and Application to an Ontario Wide Program Case Study Appendix <
http://www.conservationbureau.on.ca/Storage/14/1912_Refrigerator_Retirement_and_Replacement_Programs_-_Case_Study_Appendix.pdf>

#101093

Vermont
Multifamily Low-Income Program

Efficiency Vermont, Vermont Gas Systems and the Burlington Electric Department

I. Brief Program Summary

The Multifamily Low-Income Program collaboratively administered by Efficiency Vermont, Vermont Gas Systems, and the Burlington Electric Department offers a comprehensive treatment of all end-uses, including natural gas, to new and existing residential low-income multifamily housing. Energy efficiency measures include building shell measures, lighting, appliances, high-efficiency space heating and cooling systems, high-efficiency water heating systems, ventilation and fuel substitution where applicable in existing buildings.

A. Target Consumer Group

The program is now known and relied upon as a valued technical resource by the vast majority of owners and developers of low-income multifamily housing in Vermont. Response to the program has been favorable. Developers and owners of low-income multifamily housing now routinely call Efficiency Vermont, Vermont Gas, and Burlington Electric Department for assistance. The program is working with virtually all new subsidized multifamily construction in the state, as well as a high percentage of privately owned new construction projects.

B. Education Efforts

Training programs offered through the program have been in high demand and extremely well received. More importantly, perception of the value of energy efficiency in this market has noticeably increased, creating new norms and market demand.

C. Diagnostics

the Multifamily Low-Income Program has had a number of noteworthy successes:

- 519 housing units have received the combined program of Efficiency Vermont and Vermont Gas systems, resulting in cumulative electric savings of 1,128 MWh since 1997. An additional 136 units of multi-family housing have been served by the combined services of Vermont Gas and Burlington Electric.

- From 1997-2003, the program realized 7,201 Mcf natural gas savings and 4,744 ccf water savings.

- Efficiency Vermont has developed and implemented a *Design Guide for Energy Efficient Multifamily Housing* and related *Comprehensive* track for new construction and major rehabilitation projects. The company providing training to architects and engineers on the guide and many are not incorporating the guides extensive details and specifications in their designs. Vermont Housing and conservation Board (VHCB) have adopted the *Checklist for*

Energy Efficient Multifamily Housing as part of their energy policy. Parties applying for funding to build affordable housing must demonstrate they are meeting the checklist items.

D. Implementation

Implementing this program on a joint basis has allowed for the development of a broader, shared vision regarding these projects. Developers and multi-family building operators are receiving a consistent message from multiple companies, rather than different messages depending on service territory. There have been many opportunities for technical discussions and information exchanges between Vermont Gas Systems, Efficient Vermont, and Burlington Electric Department staff members, and everyone is learning from the combined experiences.

E. Cost

Combined Efficiency Vermont and Vermont Gas systems Project Participation:

Total efficiency upgrade costs = $794,346
Total REEP/Efficiency Vermont incentives = $307,782
Total Vermont Gas incentive = $130,959
Weatherization investment = $545,648
Owner Cost = $5,194,926

Total Efficiency Vermont Project Participation:

Total efficiency upgrade costs = $7.4 million
Total REEP/Efficiency Vermont incentives $1,645,467
Total Vermont Gas incentive = $130,959
Weatherization investment = $545,648
Owner Cost = $5,194,926

F. Funding

All VGS programs are funded through rates. Program expenses are deferred until reviewed by the Department of Public Service and Public Service Board. Upon approval, expenses are amortized in rates over a three-year period. Initial development funded through a Rebuild America grant obtained from the DOE. Operations funded by four Vermont utilities and administered by the State Weatherization Program from 1997-Feb. 2000. Since March, 2000, funding has been received from an Energy Efficiency Utility (EEU) charge on all Vermont electric bills. This charge was mandated by the Vermont Public Service Boards creation of *Efficiency Utility* contract.

101114

Washington State

Program Attribute	Vista	Cascade Natural Gas	Northwest Natural Gas	Pacific Power	Puget Sound
Target Consumer Group	Residential	Residential	Residential and Business	Residential and business	Residential and business
Utility	Gas and Electric	Gas	Gas	Electric and Gas	Electric
Education	x		x	x	x
Diagnostic	x		x	x	x
Implementation	rebates	Incentives to purchase energy-efficient space and water heating equipment	Gas conservation programs	Energy conservation programs; renewable energy program for rural areas	Energy conservation programs
Cost	$4million electric rates and $950,000 in gas rates	$813,000 annual program expenditures	Annual expenditures around $350,000	Collects $4.5 million annually	n/a
Funding	Rate surcharge	Recovery of costs through purchase gas adjustment filings	Recovery through Purchase Gas Adjustment Filings	Rate surcharge	Rate surcharge
Least Cost Planning	x	x		x	x

Least-Cost Planning
Legislation passed in March 2006 requires each electric utility, investor-owned utility, and consumer-owned utility in the state to develop an integrated resource plan. Each plan must describe the mix of generating resources and improvements in the efficient generation, transmission, distribution, and use of electricity that will meet current and future needs at the lowest reasonable cost to the utility and its ratepayers. Click here for more information.
http://apps.leg.wa.gov/billinfo/summary.aspx?bill=1010

Link to Avista's 2007 Integrated Resource Plan
Electric: http://www.avistautilities.com/resources/plans/electric.asp
Gas: http://www.avistautilities.com/resources/plans/default.asp

Link to Northwest Natural's 2004 Least Cost Plan
http://www.nwnatural.com/cms300/content_aboutus.asp?id=480

Link to PacifiCorp's 2004 Integrated Resource Plan
http://www.pacificorp.com/Navigation/Navigation23807.html

Link to Puget Sound Energy's 2005 Least Cost Plan
http://www.pse.com/energyenvironment/supplypdfs/preface.pdf

Link to Cascade Natural Gas 2004 Integrated Resource Plan -
http://www.cngc.com/_docs/2004IRP.pdf

Energy Conservation Plans by Company
Avista
Since 1995, Avista's conservation programs have been funded through a surcharge in rates called a tariff rider. The tariff rider currently collects around $4 million in electric rates and $950,000 in gas rates in Washington annually. Avista has a target to conserve at least 40 million kilowatt-hours and 240,000 therms each year in their multi-state service area. Call Avista at 1-877-576-9282 or check out their website for more information on their conservation programs: http://www.avistautilities.com/saving/default.asp

Pacific Power
In 2000, Pacific Power put in place a System Benefits Charge to fund their conservation programs in Washington. The System Benefits Charge, or SBC, is a surcharge to rates. The SBC is expected to collect around $4.5 million annually for programs that capture about 19 million kWh in electricity savings. Call PacifiCorp at 1-888-221-7070 or check out their website for more information on the programs they have available: http://www.pacificpower.net/

Puget Sound Energy
Since 1997, PSE has funded their conservation programs through the conservation rider, which is a separate surcharge on customer bills. As a result of their 2002 rate case, PSE committed to capturing 177 million kWh and 2.9 million therms in the 16-month period of September 2002 through December 2003, at an expected cost of $28 million. Call PSE at 1-800-562-1482 or check out their website for more information on their programs: http://www.pse.com/energyEnvironment/RenewableEnergyLanding.aspx

Northwest Natural Gas
In 2001, Northwest Natural began implementing gas conservation programs in Washington. The company was authorized to defer the expenditures in these programs annually, with recovery through the Purchase Gas Adjustment filings. Annual program expenditures were expected to be around $350,000; however, in the first year of implementation (2002) expenditures were $71,000. Call Northwest Natural at 1-800-422-4012 or check their website for specific program information: http://www.nwnatural.com/cms300/content_yourhome.asp?id=143

Cascade Natural Gas
In the Fall of 2002, Cascade began offering incentives for residential customers to purchase energy-efficient space and water heating equipment. The company was authorized to defer the expenditures in these programs annually, with recovery through the Purchase Gas Adjustment filings. Annual program expenditures are expected to be around $813,000 with annual energy savings of 340,000 therms. Cascade does not have a phone number for reference but check out their website for conservation tips and financing offers: http://www.cngc.com/index.asp

Appliance Standards
In May 2005 Washington passed legislation creating state energy efficiency standards for twelve appliances, including commercial clothes washers and commercial refrigerators and freezers. Click here for more information.
http://www.leg.wa.gov/wsladm/billinfo1/dspBillSummary.cfm?billnumber=1062

Building Codes
Residential: A state-developed code that exceeds 2003 IECC standards for most homes is mandatory statewide. Commercial: A state-developed code that meets or exceeds ASHRAE/IESNA 90.1-2001 is mandatory statewide. Click here for more information.
http://www.sbcc.wa.gov/

Carbon Cap & Trade
In 2004, Washington passed a bill requiring new power plants to reduce expected carbon emissions by 20 percent, or pay a third party to do so at a price of $1.60 per metric ton (rate subject to change).Click here for more information.
http://www.dnr.wa.gov/htdocs/adm/comm/nr04_028.htm

Wisconsin
"Focus on Energy"

I. Brief Program Summary

The objective of Targeted Home Performance with ENERGY STAR is to assist qualifying limited-income Wisconsin residents in making energy efficiency improvements to their homes. The improvements are completed by program consultants at minimal costs to the homeowner; a 10% co-pay is required by the program. In developing Targeted Home Performance with ENERGY STAR, WECC sought to use the existing weatherization infrastructure and also to facilitate the development of an independent network of residential building energy efficiency specialists. Targeted Home Performance with ENERGY STAR is currently delivered mostly through the local low-income weatherization network (18 of 21 contracted providers). In areas of Wisconsin where the weatherization agency is not providing program services, Targeted Home Performance with ENERGY STAR works with "Home Performance with ENERGY STAR" consultants. ("Home Performance with ENERGY STAR" is the broader market-based residential program providing energy efficiency services for existing homes offered through Focus on Energy.)

A. Target Consumer Group

Eligibility for Targeted Home Performance with ENERGY STAR is based on the applicant meeting each of three criteria: (1) be served as a electricity customer by a utility participating in Focus on Energy (some municipal and cooperative utilities do not participate), (2) meet the income guidelines (see table below), and (3) reside in an eligible dwelling type (single-family homes, mobile homes, and small multi-family buildings (up to 4 units, in these cases, 50% or more of the units must be deemed income eligible).

B. Education Efforts - N/A

C. Diagnostics

Participants first receive a home energy assessment, which is performed by a professional program consultant. This assessment reviews and analyzes household energy use and associated building systems for their performance, and includes a diagnostic safety testing of combustion appliances to ensure that the space heating and water heating systems are not creating carbon monoxide hazards or back drafting into the home.

D. Implementation

The following measures may be installed pending results of the home energy assessments:

- Insulation of attics, foundations, walls and crawl spaces;
- Sealing of air leaks (guided through blower door and other diagnostic techniques);
- Update/upgrade equipment, this includes complete replacements of furnaces, boilers, water heaters and central air conditioning systems based on the condition and efficiency of existing units; improvements to the distribution systems (ductwork, piping) also can be completed to improve performance.
- Install energy-efficient (savings) devices, such as faucet aerators, low-flow shower heads, programmable thermostats and ENERGY STAR qualified CFLs. The home performance

consultants also may analyze and suggest replacements of other devices, such as refrigerators.

Participants must allow all of the energy efficiency measures recommended by the home energy assessment to be installed in their homes. They may not pick only certain measures from the full set of recommended measures.

E.F. Cost/Funding

From the program's inception through April, 2005, Targeted Home Performance with ENERGY STAR has served a total of 641 households. The program's annual budget has been about $2 million in its first 3 years; for 20-5-2006 the budget is estimated to be about $1.2 million, reflecting overall budgeted reductions experienced by Focus on Energy.

The co-pay feature is a key element of the program. Program evaluations show that very few participants that have ben referred to the program provider have dropped out due to lack of ability to pay the 10% contribution amount. The total number of drop outs for the program to date is only about 10-15 eligible customers.

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